State Route 16 Safety Improvement Project

YOLO COUNTY, CALIFORNIA
DISTRICT 3 – YOL – 16 (PM 20.5/31.6)
03-0C4700
03-0000-0015

Initial Study with Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

June 2015

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SCH:
03-YOL-16 PM 20.5/31.6
03-0000-0015
03-0C4700

State Route 16 Safety Improvement Project
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03-0000-0015
EA 03-0C4700

INITIAL STUDY with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

JOHN D. WEBB, Office Chief
North Region Environmental Services

January 28, 2015
Date

MITIGATED NEGATIVE DECLARATION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SCH No. 2015022031
03-YOL-16-PM 20.5/31.6
03-0C470
03-0000-0015

MITIGATED NEGATIVE DECLARATION
Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to improve the safety at three separate locations along SR-16 near the communities of Madison and Esparto in Yolo County. The scope of work will include:

- Widening and paving shoulders to 8 feet.
- Providing a 20-foot wide Clear Recovery Zone (CRZ) on each side of the highway
- Installing rumble strips in the shoulders
- Adding a left turn pocket for County Road 79
- Straightening two horizontal curves (increasing the curve radius)
- Replacing or extending culverts as needed
- Providing additional access to the Madison Migrant Center off of CR-89 (Optional)

In addition, at the intersection of SR-16 and County Rd 89 between Madison and I-505, the project will add a roundabout.

Determination

Caltrans has prepared an Initial Study for this project and, following public review, has determined from this study that the proposed project will not have a significant effect on the environment for the following reasons:

The proposed project will have **no effect** on the coastal zone, wild & scenic rivers, parks and recreational facilities, growth, geology/soils/seismic/topography, and paleontology;

The proposed project will have **no significant effect** on land use, farmlands/timberlands, community character and cohesion, environmental justice, utilities/emergency services, traffic and transportation/pedestrian and bicycle facilities, visual/aesthetics, cultural resources, hydrology and floodplain, water quality and storm water runoff, hazardous waste/materials, air quality, noise, plant species, animal species and invasive species;

The proposed project will have **no significantly adverse effects** on cultural resources, natural communities, wetlands and other waters, and threatened and endangered species because the following mitigation measures would reduce potential effects to less than significant:

Visual

- If Design Option "A" (part of location 1) is built, Caltrans shall design and prepare a re-vegetation plan (RP) which would serve to minimize impacts. The plan shall be jointly prepared by a landscape architect and biologist. The RP would include measures to replace existing native riparian vegetation that will be removed or indirectly affected by construction of the proposed project. The RP shall include planting concepts, specifications, riparian restoration and wetland planting plans, plant species, sizes and quantities. The Caltrans project biologist will take the lead on the RP with the help of the Caltrans landscape architecture to design a conceptual plan for the RP.

Natural Communities

- Direct Impacts to approximately 76 Valley oak trees will be mitigated either through replacement planting on-site within Caltrans right-of-way or through the purchase of credits at a mitigation property.

Wetlands and Other Waters

- Direct impacts approximately 0.04 acres of potentially jurisdictional wetlands will be mitigated at 1:1 ratio by creating wetlands on-site. Indirect impacts to 0.28 acres of potentially jurisdictional wetlands will be mitigated at a 1:1 ratio.

- Permanent impacts to 1.80 acres of jurisdictional other Waters of the U.S. will be mitigated on-site at a 1:1 ratio by creating vegetated buffers along impacted waterways in the project area. Temporary impacts to 2.75 acres of jurisdictional other Waters of the U.S. and will be mitigated on-site at a 1:1 ratio by restoring vegetated buffers along disturbed waterways.

Threatened and Endangered Species
Valley Elderberry Longhorn Beetle

- Caltrans proposes to purchase credits sufficient to compensate for the planting of 250 elderberry shrubs, and an additional 290 associated native plantings from a USFWS approved conservation bank that services the proposed project area.

Giant Garter Snake

- Impacts to 0.61 acres of aquatic and upland GGS habitat will be mitigated through the on-site relocation, slope improvement and revegetation of South Fork Willow Slough.

JD Webb

JOHN D. WEBB, Environmental Manager - South
North Region Environmental Services

6/18/2015

Date

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CHAPTER 1 Proposed Project

Introduction

The California Department of Transportation (Caltrans) has prepared this Initial Study (IS), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Yolo County, California. Caltrans is the lead agency under CEQA. The document explains why the project is being proposed, what design options we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the design options, and the proposed avoidance, minimization, and/or mitigation measures.

Background Information

In December 2005, a Draft EIR/EA for a more expansive project on SR-16 was circulated for public review and comment, with the comment period expiring on January 23, 2006. Caltrans received many comments from members of the public and reviewing agencies regarding this project's alternatives and environmental impacts. Caltrans then evaluated the comments and reexamined the project. As a result, Caltrans prepared a new Draft EIR/EA (2009 DEIR/EA) that presented a refined project alternative and additional discussions of environmental impacts. The 2009 DEIR/EA was then circulated for public review and comment from May 6, 2009, to June 19, 2009. The 2009 FEIR/EA was approved in December 2009. On January 6, 2010, a Petition for Writ of Mandate was filed in the Sacramento Superior Court, challenging the EIR and the approval of the project. Following court proceedings, the judge agreed with most of the petitioners' contentions and on July 28, 2011, ordered the issuance of the writ, requiring Caltrans to decertify the EIR, to comply with CEQA, and to take any further action required by law. In addition, the court retained its jurisdiction in this matter until Caltrans complied with the requirements of the writ. The court still retains jurisdiction over this matter. In response to the court's order, Caltrans decertified the EIR, and then sought to re-evaluate the need for the project. Following further study and evaluation, Caltrans determined that then-current conditions in the project area no longer required the type of extensive project previously pursued, and eventually determined that there were three locations that required safety improvements. The result of that determination is a much scaled-down project that is supported by this Draft Initial Study with Proposed Mitigated Negative Declaration.

Project Funding

This project is programmed under the State Highway Operation and Protection Program (SHOPP) 201.010 Safety Improvement Program, using state and federal funds. Project construction capital costs are estimated at $20.9 million.

Purpose and Need

The purpose of this project is to improve traffic safety at three locations along SR-16 (PM 20.5/21.3, PM 23.2/23.5 and at PM 28.2/31.6) by providing improvements that address the observed collision patterns in these locations. In recent years the traffic volumes on SR 16 have increased within the project limits, along with increases in collisions in certain areas that are above the statewide average for similar facilities. Examination of collisions along the corridor revealed three locations where the collision numbers are higher than those in the adjoining segments.

The Traffic Safety Index (TSI) is the tool used for evaluating safety benefits of highway improvement projects. It is a measure of the collision cost saved by motorists expressed as a percentage of the improvement's capital cost. The TSI is determined by estimating the number and cost of collisions that may occur on the existing facility if no further improvement is made, and subtracting from it the number and cost of collisions that are expected to occur with the improvement.

The number and severity of collisions at these three locations support a Safety Index of greater than 200 (translating to a benefit/cost ratio of greater than 2:1) when improvements such as shoulder widening and curve improvements are proposed, making these locations eligible for Highway Safety Improvement Program funding. This represents the collision cost savings of the proposed project.

Location 1: PM 20.5/21.3

This location consists of two horizontal curves where SR-16 intersects County Road (CR) 79 (2-way stop controlled on County Road 79).

Location 2: PM 23.2/23.5

This location consists of a horizontal curve just west of County Road (CR) 82B. This curve has seen a pattern of run-off-road and overturn collisions.

Location 3: PM 28.2/31.6

This location is a long section of highway connecting the town of Esparto with Interstate 505. The route passes through the small community of Madison, along with several minor road

intersections with County Roads 21A and 89. There are a variety of collision types along this corridor including rear end/broadsides at intersections, run-off road and head-ons in-between intersections.

Project Description

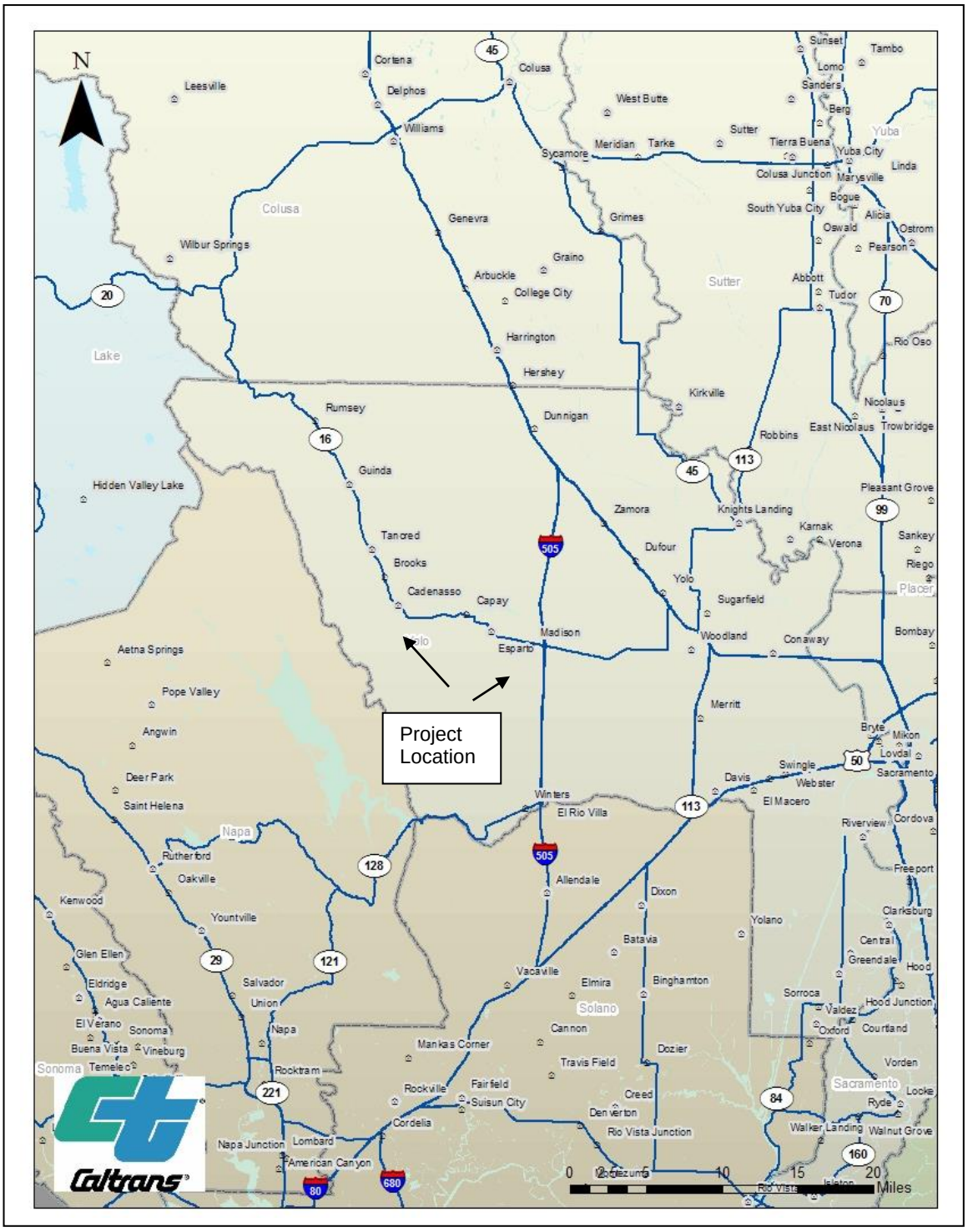
The California Department of Transportation (Caltrans) proposes to improve the safety at three separate locations along SR-16 near the communities of Madison and Esparto in Yolo County. The scope of work would include:

- Widening and paving shoulders to 8 feet
- Providing a 20 foot Clear Recovery Zone (CRZ) on each side of the highway
- Installing rumble strips in the shoulders
- Adding left turn pockets and/or a two way left turn lane
- Straightening horizontal curves
- Replacing or relining culverts as needed

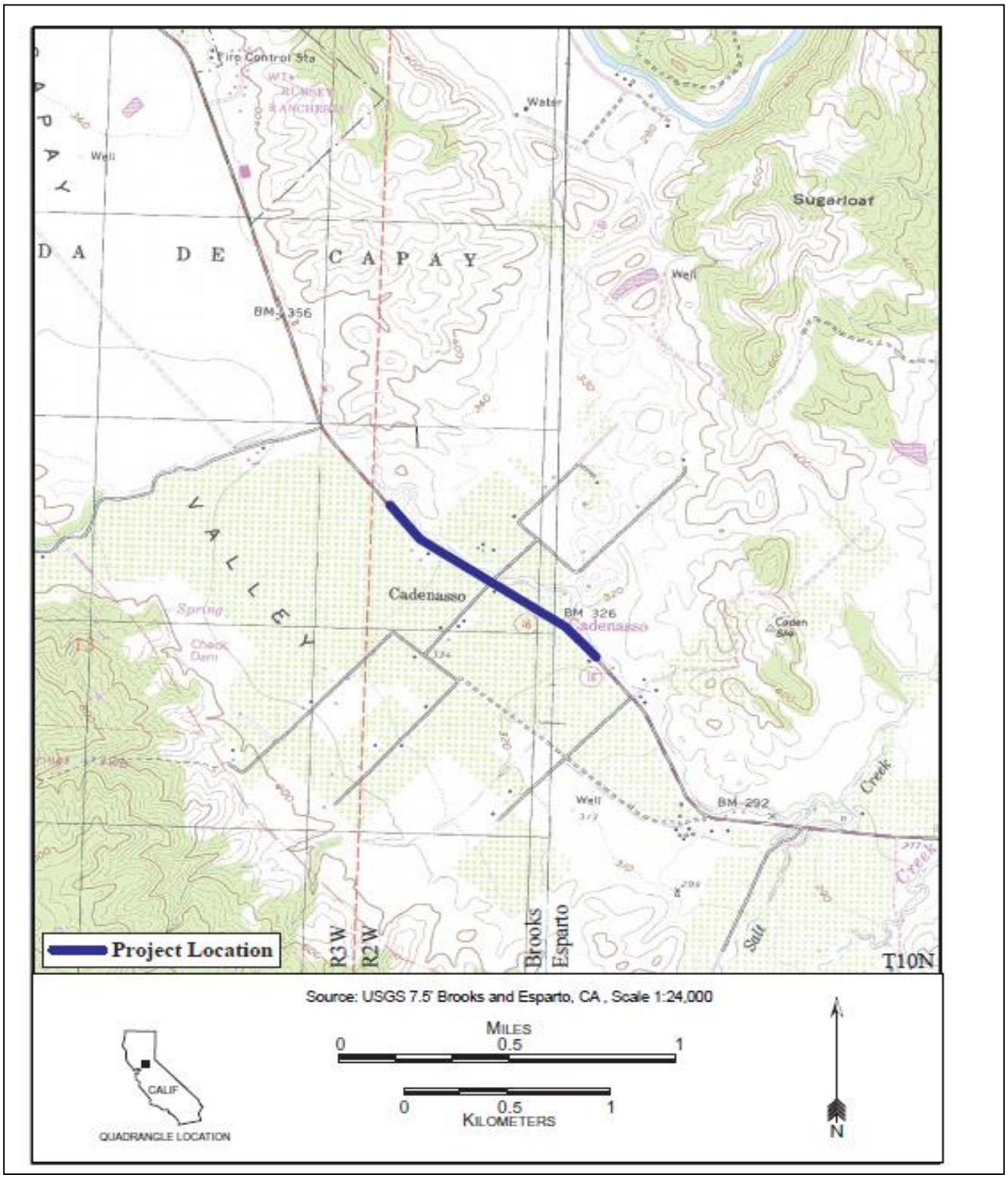
In addition, at the intersection of SR-16 and County Rd 89 between Madison and I-505, the project would either:

- Widen and add a traffic signal, or
- Add a roundabout, or
- Widen and maintain the existing all-way stop

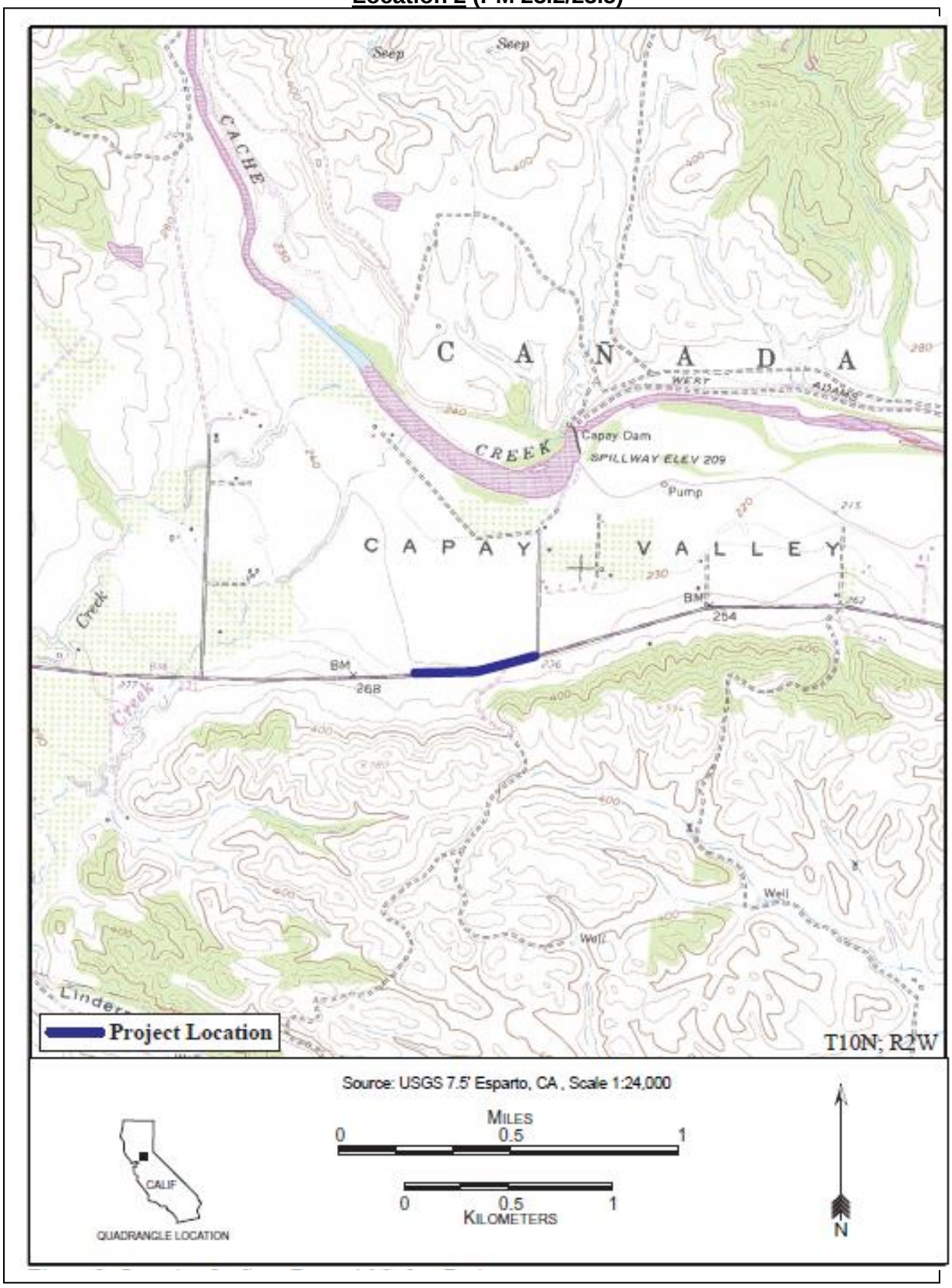
PROJECT LOCATION MAP



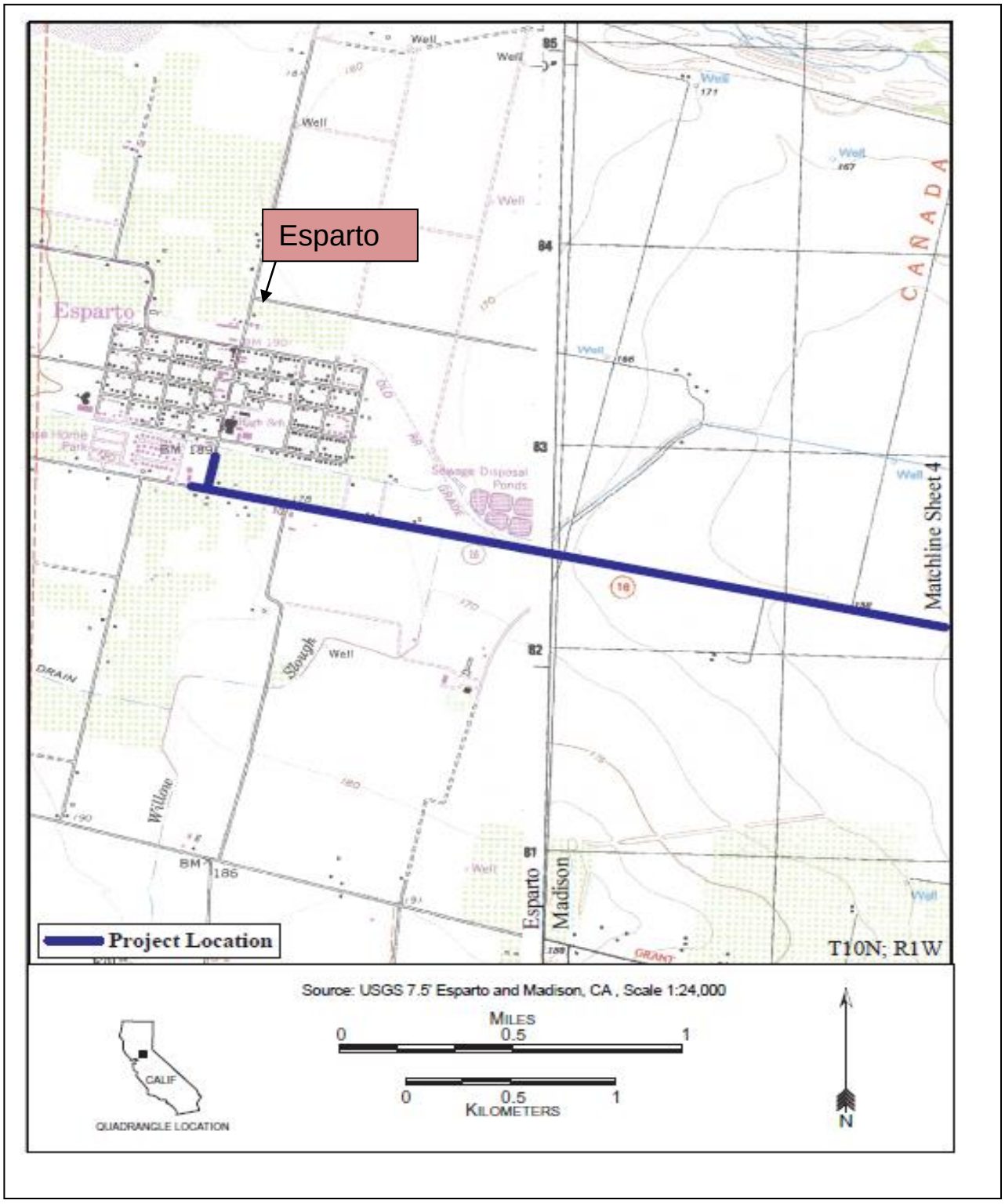
Location 1 (PM 20.5/21.3)



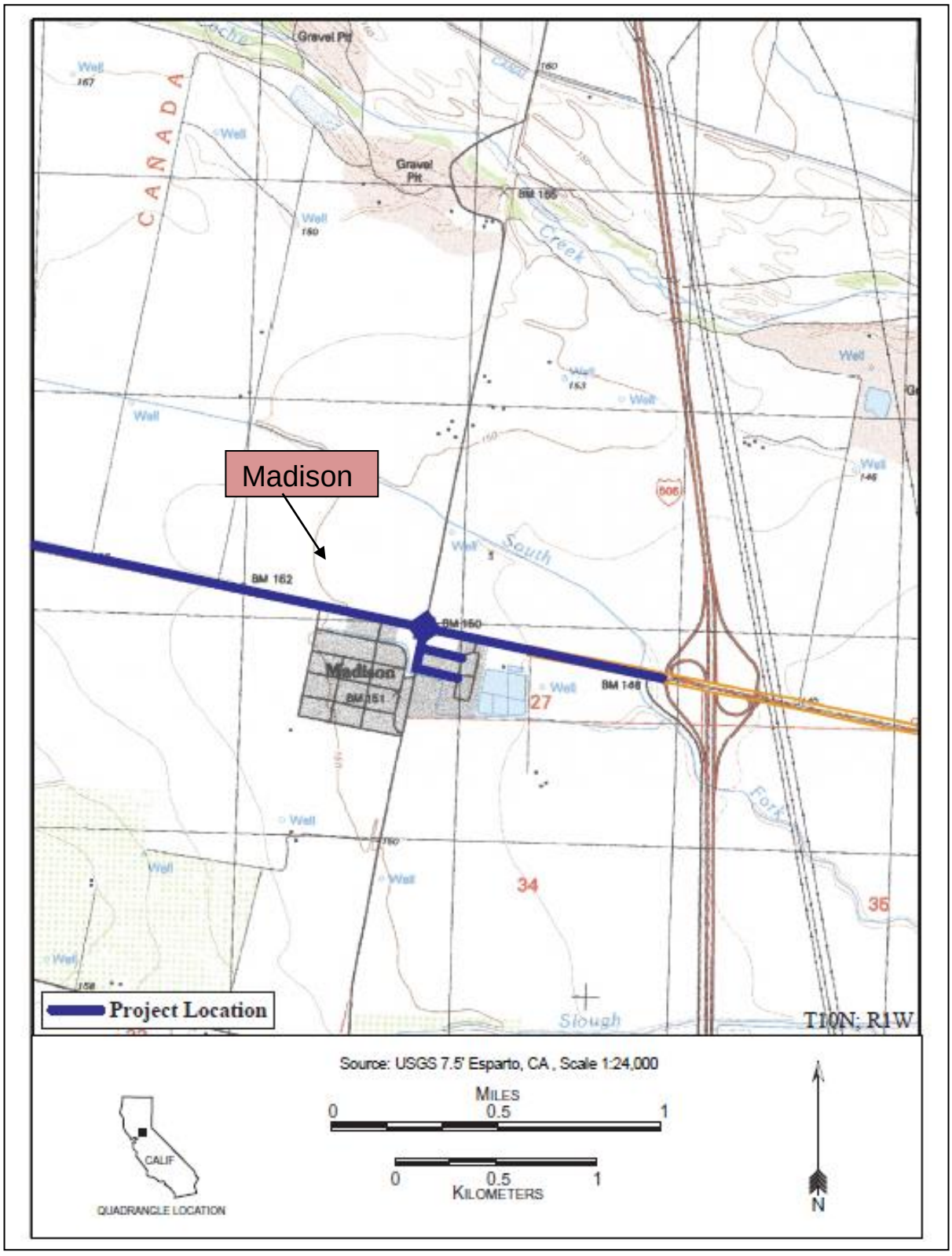
Location 2 (PM 23.2/23.5)



<u>Location 3</u> (PM 28.2/31.6)



Location 3 continued



Alternatives

BUILD (ACTION) ALTERNATIVE

Caltrans proposes to improve the safety of three separate locations along SR-16 (PM 20.5/21.3, PM 23.2/23.5 and at PM 28.2/31.6) in Yolo County. The scope of work would include:

Location 1 - County Road (CR) 79, from 0.35 miles west of CR-79 to 0.40 miles east of Co Rd 79, postmiles (PM) 20.5/21.3 (0.8 miles)

- Widening and paving shoulders to 8 feet
- Providing a 20-foot wide Clear Recovery Zone (CRZ) on each side of the highway
- Installing rumble strips in the shoulders
- Adding a left turn pocket for County Road 79
- Straightening two horizontal curves (increasing the curve radius)
- Replacing or extending culverts as needed
- Performing additional work described in Design Option A or Design Option B

Design Option A work

- Shifting the alignment north to avoid impacts to a residence

Design Option B work

- Shifting the alignment south to reduce impacts to Taylor Creek

This location has seen a pattern of rear-end and run-off–road-hit-object collisions. This collision pattern can be improved though the addition of left–turn lanes, the creation of wider shoulders, establishment of a 20-foot wide CRZ, and improvement of the curve radii. This will provide the following benefits:

- More room for errant vehicles to recover
- More room for drivers to evade other vehicles or obstacles
- The opportunity for right-turning vehicles to leave the through lane as they slow to turn
- Allows farm equipment to travel along the highway with reduced impact to traffic
- Reduced likelihood of a vehicle losing control in the curve
- Reduced potential for rear end collisions by providing left turn pockets that allow drivers to remove themselves from the through traffic lane as they stop and wait for a gap in oncoming traffic
- Allow additional room for law enforcement to conduct traffic enforcement stops
- More room for bicyclists and pedestrians

Location 2 – West of CR-82B, from 0.34 miles west of CR-82B to 200 feet. west of CR-82B, PM 23.2/23.5 (0.3 miles)

- Widening and paving shoulders to 8 feet
- Providing a 20-foot wide CRZ on each side of the highway
- Installing rumble strips in the shoulder
- Flattening the vertical curve
- Straightening the horizontal curve (increasing the curve radius)
- Flattening the vertical curve (increasing the length)
- Replacing or extending culverts as needed

This collision pattern for Location 2 would be improved through the creation of wider shoulders, establishment of a 20-foot wide CRZ, and improvement of the curve radius, and would provide the following benefits:

- More room for errant vehicles to recover
- more room for drivers to evade other vehicles or obstacles
- Reduced likelihood of a vehicle losing control in the curve
- Allow additional room for law enforcement to conduct traffic enforcement stops
- More room for bicyclists and pedestrians

Location 3 – Esparto to Interstate (I)-505, from 350 feet west of CR-21A to South Fork Willow Slough, PM 28.2/31.6 (3.4 miles)

Esparto to Madison

- Widening and paving shoulders to 8 feet
- Providing a 20-foot wide CRZ on each side of the highway
- Installing rumble strips in the shoulders
- Shifting the alignment to the north to avoid residential and commercial development
- Replacing or extending culverts as needed
- Adding a Two Way Left Turn Lane (TWLTL) from 560 feet west of CR-86A to 570 feet east of CR-86A

Madison to I-505

- Widening and paving shoulders to 8 feet
- Providing a 20-foot wide CRZ on each side of the highway
- Installing rumble strips in the shoulders
- Shifting the alignment to the north to avoid residential development
- Replacing or extending culverts as needed
- Adding a two-way left turn lane (TWLTL) from 100 feet west of Tutt St. to CR-90.

- Provide additional access to the Madison Migrant Center off of CR-89 (Optional)
- Providing additional work described in Design Option A, B, or C below:

Design Option A work

- Widening and adding a traffic signal at the SR-16/CR-89 intersection

Design Option B work

- Adding a roundabout at the SR-16/CR-89 intersection

Design Option C work

- Widening and maintaining the existing all-way stop at the SR-16/CR-89 intersection

Several different roadway improvements are proposed to address the collision patterns at Location 3, including widening shoulders, improving the clear recovery zone, installing left turn pockets, and two-way left turn lanes, and improving intersection controls.

Widening the shoulders and establishing of a 20-foot wide CRZ on each side of the highway offers the following benefits:

- More room for errant vehicles to recover
- More room for drivers to evade other vehicles or obstacles
- More room for drivers to bypass left-turning vehicles
- Permits right-turning vehicles to leave the through lane as they slow to turn
- Allows farm equipment to travel along the highway with reduced impact to traffic
- Room for law enforcement to conduct traffic enforcement stops

- More room for bicyclists and pedestrians

Two-way left-turn lanes provide benefits similar to left-turn pockets. They allow drivers to remove themselves from the through traffic lane as they stop and wait for a gap in oncoming traffic. They also offer a refuge area for left-turning drivers turning from the side road/driveway to clear one direction of traffic while they wait for an opening in the other.

For construction purposes, Location 2 is proposed to begin construction in 2016 and Locations 1 and 3 are proposed to begin construction in 2017.

NO-BUILD (NO ACTION) ALTERNATIVE

The No-Build alternative would make no improvements to the existing roadway and would have neither construction nor environmental impacts; however, routine maintenance would still occur as necessary. By not making any improvements, this alternative would fail to

deliver the safety improvements the project is intended to provide and not meet the purpose and need for the project.

Identification of a Preferred Design Option

After the public circulation period closed, all comments were considered, and Caltrans has selected a preferred design option and made the final determination of the project's effect on the environment. Under the California Environmental Quality Act (CEQA), no unmitigable significant adverse impacts were identified and as a result, the Department has prepared a Mitigated (MND).

The preferred design options for this project at Locations 1 and 3 are as follows:

Location 1 - County Road (CR) 79, from 0.35 miles west of CR-79 to 0.40 miles east of Co Rd 79, postmiles (PM) 20.5/21.3 (0.8 miles)

- Widening and paving shoulders to 8 feet
- Providing a 20-foot wide Clear Recovery Zone (CRZ) on each side of the highway
- Installing rumble strips in the shoulders
- Adding a left turn pocket for County Road 79
- Straightening two horizontal curves (increasing the curve radius)
- Replacing or extending culverts as needed

Design Option B is the preferred option

- Shifting the alignment south to reduce impacts to Taylor Creek

Design Option B offers the following advantages when compared to Design Option A:

- Less impacts to Taylor Creek
- Less Right-of-Way acquisition
- Less environmental mitigation required

Location 3 – Esparto to Interstate (I)-505, from 350 feet west of CR-21A to South Fork Willow Slough, PM 28.2/31.6 (3.4 miles)

Esparto to Madison

- Widening and paving shoulders to 8 feet
- Providing a 20-foot wide CRZ on each side of the highway
- Installing rumble strips in the shoulders
- Shifting the alignment to the north to avoid residential and commercial development
- Replacing or extending culverts as needed

- Adding a Two Way Left Turn Lane (TWLTL) from 560 feet west of CR-86A to 570 feet east of CR-86A

Madison to I-505

- Widening and paving shoulders to 8 feet
- Providing a 20-foot wide CRZ on each side of the highway
- Installing rumble strips in the shoulders
- Shifting the alignment to the north to avoid residential development
- Replacing or extending culverts as needed
- Adding a two-way left turn lane (TWLTL) from 100 feet west of Tutt St. to CR-90.
- Provide additional access to the Madison Migrant Center off of CR-89 (Optional)

Design Option B is the preferred option

- Adding a roundabout at the SR-16/CR-89 intersection

Design Option B offers the following advantages:

- Higher safety improvement when compared with Design Option A
- Improved roadway capacity when compared to Design Option C

Additional access to the Madison Migrant Center off of CR-89 will be provided.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION

This project is very narrow in scope and only addresses work at three locations that are supported by justification of the work at those three specific locations.

As a result there are no viable alternatives to these proposals; however, there are design options are considered within each location.

INTERIM CALTRANS PROJECTS

Over the last several years, a number of traffic warning, regulatory, and guide signs have been installed within and adjacent to the project limits. Reflective pavement markers and a flashing beacon were installed at the Capay curve, and both have helped reduce accidents at this location. Additional guide signs were placed to give information as to highway routes, direction, destination and points of interest. Also, several smaller location-specific projects have been completed that have resulted in improved safety at those specific locations.

INTERIM SAFETY PROJECTS

PROJECT	LOCATION	STATUS
Super-elevation improvements & metal beam guardrail	Capay Curve and two curves west of Capay	Completed 2004
Install four way flashing beacon	At CR-89	Completed 2004
Install inverted thermoplastic on centerline	From I-505 to Brooks (Except in Esparto & Capay)	Completed 2003
Improve sight distance (Tree Removal)	At CR-85B	Completed 2003
International striped crosswalks	Esparto	Completed 2003 and repainted in 2004
Left-turn centerline re-stripe along Yolo Ave.	Esparto	Completed 2004
Install 45 MPH sign, Install no-passing stripe, add 55 MPH and 35 MPH signs, daylight headlight signs, etc.	Various locations	Completed 2001/2002
Signalize intersection and access improvements	Cache Creek Casino frontage	Completed 2004
Signalize intersection	Northbound I-505 exit to SR-16	Completed 2005
Capay shoulders	SR-16 through Capay	Completed 2008

Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species (VELB and GGS)	A Biological Opinion (BO) will be obtained prior to the approval of the final environmental document
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States	Permits will be obtained prior to approving the project for construction
California Department of Fish and Wildlife	1602 Streambed Alteration Agreement	Permits will be obtained prior to approving the project for construction
California Regional Water Quality Control Board	Section 401 Permit Certification	Permits will be obtained prior to approving the project for construction

CHAPTER 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- **Coastal Zone** – The project is not in a coastal zone.
- **Wild and Scenic Rivers** – The project is not in or adjacent to a designated Wild and Scenic River.
- **Parks and Recreational Facilities** – The project is not adjacent to or within any Parks and Recreational Facilities.
- **Growth** – This is a traffic safety project that does not increase capacity and has no potential to impact growth.
- **Geology/Soils/Seismic/Topography** – This is a traffic safety project with no potential for adverse impacts to the geology, soils, and topography of the project area.
- **Paleontology** – Based on previous environmental studies and construction projects in the area, there is no potential for adverse impacts to paleontological resources.
- **Air Quality** – The Air Quality Analysis shows there is no potential for adverse impacts to air quality; however, temporary impacts to air quality are discussed in the Construction Impacts section.
- **Noise** - The Noise Analysis shows there is no potential for adverse impacts to noise levels; however; temporary impacts from noise are discussed in the Construction Impacts section.

Human Environment

LAND USE

Existing and Future Land Use

The proposed project runs through the towns of Madison and Esparto. In general, residents in the area refer to themselves as residents of Capay Valley, which extends from the Yolo County/Lake County boundary to the Capay Dam and includes the communities of Rumsey, Guinda, Brooks, and Capay. For the purposes of this document, "Capay Valley" will also include the communities of Esparto and Madison.

Capay Valley is home to approximately 4,500 residents, or about three percent of Yolo County's population. Nearly 90 percent of Yolo County's residents live in the four incorporated cities of: Woodland, Davis, West Sacramento and Winters, all of which are situated along major interstate freeways east and south of the project area. None of the communities in the Capay Valley are incorporated cities.

Land use in the project area is divided between urban and agricultural. Within the developed areas of Capay, Esparto, and Madison there are areas set aside for residential, commercial, industrial, and public uses. Outside of these communities, along the SR-16 corridor, there are only two zoning classifications: Agricultural (A-1) and Agricultural Preserve (AP). The minimum parcel size allowable in A-1 zones is 20 acres. In AP zones, the minimum parcel size is 80 acres, if the land is irrigated, and 160 acres in non-irrigated areas. These minimum parcel sizes are designed to ensure that parcels are large enough to sustain agricultural production while minimizing impacts on adjacent non-agricultural parcels.

Capay Valley has seen several changes over the past 20 years. There is a strong public perception that the expansion of the Cache Creek Casino Resort (Casino) has fueled many new developments. What began as a bingo hall in 1985 is now a resort destination featuring a number of amenities and contributing heavily to the area's economy. Recently completed or proposed projects for the Capay Valley Region are as follows:

- Yocha-De-He Golf Club is an 18-hole golf course located on land adjacent to the Casino. It opened to the public in early 2008 and is operated by the Rumsey Band of Wintun Indians.

- In 2004, an expansion of the Casino facilities was completed. These additions to the Casino's complex include a 200-room hotel, a 1,883-space multi-level parking garage, expanded gaming facilities, a spa, nightclub, and eight restaurants. Upon completion the facility was enlarged to approximately 415,000 square feet. Before

the 2004 expansion, the facility was approximately 113,000 square feet and featured a surface parking lot, mini-mart and gas station, tribal administration offices, a community center, and wastewater treatment plant.

- In 2007, the Rumsey Band of Wintun Indians proposed an expansion of the current Cache Creek Casino Resort into the Cache Creek Casino Destination Resort. The Tribe filed a Notice of Preparation (NOP) with the State Clearinghouse on July 2, 2007, and in April 2008, the Tribe released a draft Tribal Environmental Impact Report (TEIR). The Tribe certified the final TEIR in September 2008. The project, as identified, will include construction of 467 guest rooms in a ten story hotel, 27 hillside casitas, four new formal restaurants, three new swimming pools, two small restaurants, an event/conference center featuring a 2,300 seat entertainment venue, three to four new retail shops, six new spa treatment rooms, 23,000 square feet of additional gaming space, office space, related support facilities and utilities, and 2,410 additional parking spaces. The Cache Creek Destination Resort Draft TEIR identified an expansion of the Tribal Government Center as well as construction of 30 homes north of the project site. These developments are only conceptual at this time and no further information is available. There is no estimated time for construction.

- Parker Place, Country West II, and Esperanza Estates were constructed in 2011 and 2012 on the west side of Esparto adding approximately 225 single-family homes to the area.

- Ryland Homes Lopez Subdivision in Esparto was approved and began construction in 2006 and has added 72 single-family homes to the area.

- In 2005, the Esparto Unified School District released a draft Environmental Impact Report for the proposed Esparto High School. This 65-acre site will include academic and school office buildings, athletic fields, a student center, tennis courts, basketball courts, parking for students, teachers, and buses, and an agricultural sciences area. The site is currently zoned AP (Agricultural Preserve) and is subject to a Williamson Act contract. The site is adjacent to SR-16 and west of CR-85B, between Esparto and Madison. The proposed new Esparto High School is on hold and there is no estimated time for construction.

- A site east of Madison and adjacent to SR-16 and CR-90, has been identified as a potential site for a Secure Community Reentry Facility (Reentry Facility). In September 2008, the Yolo County Board of Supervisors authorized the signing of a “Reentry Program Facility Siting Agreement” between the County and the California

Department of Corrections. The County additionally entered into an Option to Purchase agreement for the Kathyanna Ranch property, the potential location of this Reentry Facility. This agricultural property is currently subject to a Williamson Act contract. As of 2014, the project has never materialized.

- There are several proposed projects within developed areas along SR-16. They include: a proposed retail store at the corner of SR-16 and CR-86A and a proposed mixed-use building along Yolo Avenue between Madison Street and Grafton Street in Esparto.

- There have been numerous Caltrans improvements to SR-16 in this area including normal maintenance activities, such as left-turn lane re-striping. The largest project constructed on the highway recently, in 2011, was the improvement to SR-16 in front of the Casino. This project was partially funded by the Casino and was designed in anticipation of increased business to the site.

Consistency with State, Regional, and Local Plans and Programs

The general plans and guidances that cover the Project Area include the Yolo County General Plan, Capay Valley General Plan, Esparto General Plan, Madison General Plan, and the Municipal Service Review and Sphere of Influence for the Madison Community Service District.

Yolo County General Plan

In November 2009, Yolo County adopted its 2030 Countywide General Plan. The 2030 Countywide General Plan continues to strongly emphasize protection for agricultural lands. The approved plan proposes a Preferred Land Use Alternative, which was adopted by the Yolo County Board of Supervisors. This Preferred Land Use Alternative identifies the following overall goals:

- The continuing primary focus on agriculture and related endeavors throughout the County, particularly as related to economic development and job creation.

- Standards for sustainability, community identity, rural service standards, job-housing match and balance, energy conservation, protection of natural resources, smart growth, community health and safety, and efficient and responsible transportation options.

- Limited residential and other related community development primarily within the existing towns and only under certain sustainable conditions.

- Use of community-based planning processes for the development of agricultural districts and specific plans.

The Circulation Element of the Yolo County 2030 Countywide General Plan states that SR-16 from CR-78 (just west of the Casino) to CR-85B (just west of Esparto) needs spot improvements "including but not limited to intersection control and lane configuration improvements, passing lanes and/or wider travel lanes and shoulders." SR-16 from CR-21A (just east of Esparto) to Interstate 505 is identified as needing expansion to 4 lanes to accommodate future travel demands. In addition, a segment of CR-21A connecting these two sections of SR-16 (although not a part of the highway system) would be upgraded to a major two-lane county road standard. While the 2030 General Plan is intended to supercede the Land use and Circulation Elements of the prior general plan, there is no specific discussion within the plan of the timing of this facility expansion.

Capay Valley Area General Plan

The Capay Valley Area General Plan was completed in May 1982 as an amendment to the Yolo County General Plan. In September 2007 a Capay Valley Area General Plan Update (Area Plan) was released. Like the 1982 version, this updated Area Plan places strong emphasis on protection of agricultural resources of the Capay Valley. The Area Plan also encourages road improvements to accommodate farm equipment in a practical manner and the construction of bike lanes whenever practical or possible.

Town of Esparto General Plan

The Town of Esparto General Plan, originally prepared in 1982, was updated in 1996 and again in April 2007. Esparto's General Plan serves to supplement the Yolo County General Plan. Esparto's General Plan "is intended to result in a compact and recognizable small town having its own character – rather than the aimless sprawl associated with so many developing urban areas." The plan also emphasizes the importance of accommodating farm machinery on main routes. A widening to four lanes of SR-16 is also not currently called for in the existing Town of Esparto General Plan.

Consistency of the Proposed Project

All of the planning documents applicable to this area emphasize the importance of farmland and the rural character of the area. The proposed project remains consistent with the circulation policies enumerated in the Yolo County General Plan, the Town of Esparto General Plan, and the Capay Valley Area General Plan. These policies emphasize safety, including that of farm equipment and bicycles. The proposed project is designed to improve safety for all roadway users. By providing standard shoulders and a clear recovery zone, the

project would help to eliminate obstacles for wide farm equipment attempting to use the roadway. The wider shoulders also improve the roadway for bicycle and pedestrian use.

Environmental Consequences

Much of the land involved in the project area is either Prime Farmland or Farmland of Local Importance. Additionally, many of the agricultural parcels adjacent to SR-16 are currently under Williamson Act contracts. (See Farmland Table on page 24)

Portions of these parcels that are adjacent to SR-16 would need to be acquired in order to construct this project. Depending on the parcel, the proposed project would require the conversion of between approximately 0.10 acre and 5.5 acres of farmland.

The acquisition of this land is not expected to substantially affect existing agricultural designations or any other existing or future land uses. Farmers will still be able to farm the remainder of their land.

The use of slivers of large parcels of farmland in order to create a safer highway would not likely have a substantial impact on farming in this area. Some areas outside of the new right-of-way (R/W) may be returned to adjacent property owners pending negotiations with Caltrans R/W staff after project approval. Within the context of the ample farmland supply in Yolo County, the proposed project would not pose a serious threat to this resource.

CEQA Considerations

Less than significant impacts to state, regional and local plans pursuant to CEQA are anticipated.

Avoidance, Minimization, and/or Mitigation Measures

- No avoidance, minimization and/or mitigation measures are required for Existing and Future Land Use.

FARMLANDS

Regulatory Setting

CEQA requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses. Coordination with the Natural

Resources Conservation Service (NRCS) and the California Department of Conservation will occur throughout the project development process.

Affected Environment

A Farmland Assessment was completed in April 2014. According to the Yolo County Agriculture Department, in 2012, Yolo County's agricultural production was worth approximately $645 million dollars. Yolo County ranked 23rd in the state for agricultural production, with one percent of total statewide agricultural output. Top agricultural commodities include tomatoes, wine grapes, cattle, and corn. Capay Valley is predominantly known for its walnuts and almonds, as well as wine grape production. The Capay Valley is also home to several small, family-owned farms that sell produce directly to homes in the region on a subscription basis.

According to the Yolo County 2030 General Plan, there are 540,591 acres of farmland in Yolo County, of which, 257,893 acres meet the criteria to be considered prime farmland. The farmland parcels being impacted by the proposed project are in those areas identified as prime farmland. The project will impact 27 agricultural parcels (32 acres); of those, 11 of the parcels (13 acres), are currently under Williamson Act contracts.

Agricultural equipment using the highway in the project area averages in width from 14-16 feet. Given these widths, agricultural equipment is likely to use an entire vehicle lane (approximately 12-feet wide) as well as the roadway's shoulders, which are in some places unpaved or nonexistent.

There is a zone between farm production areas and the highway that is used by farmers to turn equipment around. This area may contain roadside fill slopes, roadside ditches or private access roads. Throughout most of the project the existing transition between the highway and the farmland is gradual. Following construction, fill slopes will be at a 4:1 and the gradual transition between the highway and the production areas will be maintained, similar to the preconstruction conditions. The highway will remain at or very near it's exsting elevation.

Environmental Consequences

Farmland

The proposed project would acquire a total of approximately 32 acres of farmland from 27 parcels, including approximately 13 acres on 11 parcels under Williamson Act contracts. The Natural Resources Conservation Service (NRCS) and the California Department of Conservation were consulted about the proposed project and its potential impacts to farmland.

The impacts from the proposed project will result in the loss and relocation of ditches, access roads and some production areas. The project is not expected to result in an impact to an extent that prevents the landowner from continuing production.

The use of slivers of large parcels of farmland in order to create a safer highway would not likely have a substantial impact on farming in this area. Some areas outside of the new right-of-way (R/W) may be returned to adjacent property owners pending negotiations with Caltrans R/W staff after project approval. Within the context of the ample farmland supply in Yolo County, the proposed project would not pose a serious threat to this resource.

The approximate 32 acres of impacts is less that 1% (0.01%) of the total amount of prime farmland in Yolo County. No take of farmland will prevent future farming. Some areas outside of the new right-of-way (R/W) may be returned to adjacent property owners pending negotiations with Caltrans R/W staff after project approval.

Williamson Act

Several of the parcels adjacent to SR-16 within the project limits are currently under Williamson Act contracts. Several proposed work locations do require some acquisition of Williamson Act contract lands.

According to the California Department of Conservation, Yolo County had 418,893 acres of land subject to Williamson Act contracts in 2009. The removal of an estimated 13 acres of Williamson Act contract land within the project area represents less than one percent of this total.

For several parcels under contract, there will be no acquisition of land in fee. County and state drainage easements will be acquired as well as, in a few cases, temporary construction easements. These drainage easements will not preclude continued agricultural use or continued enrollment in the Williamson Act program.

Additionally, Yolo County has established minimum acreages for establishment for Agricultural Preserves. Under Yolo County Code Section §8-2.407, the minimum acreage requirement for the establishment of an agricultural preserve shall be 100 acres total, however there are exceptions for inclusion into existing contiguous agricultural preserves. The California Department of Conservation has established minimum acreage requirements for new Williamson Act contracts. In § Section 8-2.407.5 the minimum acreage requirement for new Williamson Act contracts is 40 or 80 gross acres, depending upon the soil type and irrigation status. However, these minimum acreage requirements only apply to new Williamson Act contracts and should not impact any of the parcels that will be subject to acquisition under this project. Of the 27 parcels, 12 parcels are already under the 40 acre

minimum and would not qualify for a Williamson Act contract in their existing condition. Of the 27 parcels, 2 parcels are within the range of 40 to 80 acres and could qualify for future Williamson Act contracts. Caltrans will not be impacting the two qualifying parcels to an extent that would preclude them from qualifying for future Williamson Act contracts.

According to Government Code Section 51292 no public agency or person shall locate a public improvement within an agricultural preserve unless the following findings are made:

(a) The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve.

(b) If the land is agricultural land covered under a contract pursuant to this chapter for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement.

According to Government Code Section 51293, Section 51292 shall not apply to:

(g) All state highways on routes as described in Sections 301 to 622, inclusive, of the Streets and Highways Code, as those sections read on October 1, 1965.

Because many of the parcels adjacent to SR-16 are currently under Williamson Act contracts there are areas in which no roadway widening could occur without some impact to Williamson Act lands. The need for safety improvements in these areas means that some of this land must be acquired for the purpose of bringing the roadway up to current highway standards. The project has been designed to avoid impacts as much as possible while meeting current highway standards. There are no reasonably feasible alternatives to avoiding contracted land. Although state highways are not subject to Section 51292, the findings required by Government Code Sections 51292(a) and 51292(b) can be made since the use of Williamson Act land is not based primarily on cost; it is based on necessity and on the existing highway's condition.

Of the 11 Williamson Act parcels affected by the proposed project, all would involve the acquisition of less than ten percent of the total acreage under contract.

The project would require less than 13 acres of Williamson Act lands in its entirety.

The California Department of Conservation concluded the project may proceed pursuant to its findings specified in their response letter to Caltrans dated July 8, 2014. (See Appendix F)

Farmland Table

Farmland Type	Current Parcel Size (acres)	*Amount Required (acres)	Remainder (acres)	Current Actual Use of Proposed Acquired Land
Loc. 1 – Prime Farmland (W)	316.12	.62	315.50	Agriculture
Loc. 1 – Prime Farmland (W)	36.65	0.62/0.88	35.77	Agriculture
Loc. 1 – Prime Farmland (W)	15.89	1.62/0.91	14.27	Highway Shoulder/Ditch
Loc. 1 – Prime Farmland (W)	8.15	0.99/0.47	7.16	Agriculture
Loc. 1 – Farmland of Local Potential (W)	21.99	0.37/0.72	21.27	Highway Shoulder/Ditch
Loc. 1 – Prime Farmland (W)	22.59	1.21	21.38	Agriculture
Loc. 1 – Prime Farmland	6.04	0	6.04	Agriculture
Loc. 1 – Farmland of Local Potential	280.46	0.80	279.66	Highway Shoulder/Ditch
Loc. 2 – Farmland of Statewide Importance (W)	309.75	2.49	307.26	Agriculture
Loc. 3 – Prime Farmland	103.4	2.41	100.99	Agriculture
Loc. 3 – Prime Farmland	64.45	2.45	62.00	Agriculture
Loc. 3 – Prime Farmland	376.02	5.53	370.49	Highway Shoulder/Ditch
Loc. 3 – Prime Farmland (W)	326.33	3.59	322.74	Agriculture
Loc. 3 – Prime Farmland (W)	190.83	0.18	190.65	Agriculture
Loc. 3 – Prime Farmland	142.76	0.47	142.29	Agriculture
Loc. 3 – Prime Farmland	8.51	0.32	8.19	Agriculture
Loc. 3 – Prime Farmland	19.43	2.38	17.05	Highway Shoulder/Ditch
Loc. 3 – Prime Farmland	6.85	0.31	6.54	Highway Shoulder/Ditch
Loc. 3 – Prime Farmland	70.43	0.91	69.52	Agriculture
Loc. 3 – Prime Farmland	214	1.14	212.86	Agriculture
Loc. 3 - Prime Farmland (W)	13.13	0.10	13.03	Highway Shoulder/Ditch
Loc. 3 – Prime Farmland	108.62	0.52	108.10	Highway Shoulder/Ditch
Loc. 3 – Prime Farmland (W)	104.1	0.58	103.52	Highway Shoulder/Ditch
Loc. 3 – Prime Farmland	148.94	0.65	148.29	Highway Shoulder/Ditch
Loc. 3 – Prime Farmland	148.94	0.74	148.20	Highway Shoulder/Ditch
Loc. 3 – Other Land	16.88	0.87	16.01	Highway Shoulder/Ditch
Loc. 3 – Other Land	6.80	0.33	6.47	Highway Shoulder/Ditch

Farmland Equipment

The Caltrans Transportation Concept Report (TCCR) for SR-16 recommends paving unpaved turnouts and widening shoulders to current design standards where feasible to allow slow moving farm vehicles to pull off the highway and allow traffic to pass. The proposed project does not include turnouts but does include widening the paved shoulder surface. An eight foot wide shoulder would not be wide enough to allow tractors with large combines or other pieces of equipment to completely move out of the roadway. However, this would represent an improvement over current conditions; the current cross-section (two foot shoulders with 12-foot lanes) means that there is not enough room for a piece of farm equipment 16 feet wide on one side of the road.

The proposed build alternatives would accommodate farm equipment by providing a 20-foot Clear Recovery Zone (CRZ) that would be sloped at a 4:1 ratio wherever possible. The CRZ represents an area that is free of obstructions that allows an errant vehicle to recover without striking a fixed object. The slope is also flat enough that it will not direct a vehicle to the bottom of the slope, but instead, makes it possible for the vehicle to recover and return to the roadway. In order for this to happen, the slope needs to be at a 4:1 ratio (horizontal:vertical) or flatter. The CRZ is measured from the edge of traveled way and includes the 8 foot paved shoulder, 3 foot wide choker to the hinge point (sloped 6:1), and the first 9 feet of the roadway side slope. This 9 foot section is what will be sloped at 4:1 or flatter. Wherever highway access points exist, the connection will be made at a flat enough grade to allow vehicles to easily enter or exit the highway, just as at any roadway connection. Farm equipment moving along the wide shoulder will have a greater ability to operate ouside the traveled way and reduce the likelihood of any wide towed equipment striking traffic or roadside obstacles. This would represent an improvement over the existing narrow shoulder.

According to California Motor Vehicle Code Section 21650(f), when a vehicle “is necessarily traveling so slowly as to impede the normal movement of traffic, that portion of the highway adjacent to the right edge of the roadway may be utilized temporarily” when safe. Currently, equipment of this width must utilize the oncoming traffic lane in order to stay on the road. Added shoulders would provide this equipment with enough room to temporarily occupy the shoulder to avoid oncoming traffic and to allow queued traffic to pass.

Widening the shoulders and improving the clear recovery zone in these three project locations would provide a wider and clearer line of sight for the agricultural equipment to move through the area.

On April 2, 2015, Caltrans performed a roundabout demonstration in Woodland in which a “mock” roundabout was set up on an open field. Various types of farm equipment were

brought in to drive through the roundabout. The goal of the demostration was to show that a roundabout can accommodate large farm equipment. The demonstration was videotaped and can be found at this link: https://youtube/JoaB-gQCsD8.

CEQA Considerations

Less than significant impacts to farmlands, Williamson Act properties, and farmland equipment pursuant to CEQA are anticipated.

Avoidance, Minimization, and/or Mitigation Measures

- No avoidance, minimization and/or mitigation measures are required for Farmland.

COMMUNITY IMPACTS

Community Character and Cohesion

REGULATORY SETTING

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

AFFECTED ENVIRONMENT

Caltrans completed a Community Impact Assessment in April 2014. The Capay Valley is highly cohesive. People in the project area generally identify themselves as residents of their community (e.g., Esparto, Madison) and as residents of the Capay Valley. Residents of this area are likely to see each other frequently at the grocery store, the post office, businesses, and restaurants, as well as at school and church. Other factors contributing to the community's cohesiveness are the number of active civic organizations and the stability of the neighborhoods.

ENVIRONMENTAL CONSEQUENCES

Within the project limits SR-16 crosses through the towns of Esparto and Madison. The proposed project will not make any improvements within the town of Esparto. The proposed traffic safety improvements made within the town of Madison will not divide neighborhoods or separate residences from community facilities. No impacts to community character and cohesion are anticipated.

CEQA Considerations

Less than significant impacts to community character and cohesion pursuant to CEQA are anticipated.

AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

- No avoidance, minimization and/or mitigation measures are required for Community Impacts.

Relocations and Real Property Acquisition

REGULATORY SETTING

Caltrans' Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix C for a summary of the RAP.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 United States Code [USC] 2000d, et seq.). Please see Appendix B for a copy of the Department's Title VI Policy Statement.

AFFECTED ENVIRONMENT

A Relocation Impact Memorandum was completed in July 2014. This memo discusses the potential impacts to property owners, businesses, or persons in possession of real property to be acquired who would qualify for relocation assistance benefits or entitlements under the Uniform Relocation Assistance Act of 1970.

ENVIRONMENTAL CONSEQUENCES

The proposed project would require the partial acquisition of twenty six parcels, three of which contain residences within or in close proximity to the new proposed R/W. These parcel acquisitions come from agricultural and residential parcels of land.

The exact number and size of full and partial acquisitions is subject to final design, which will occur after the final environmental document and project have been approved. Approximate proposed R/W lines can be seen on the Environmental Study Limit maps in Appendix F.

CEQA Considerations

With the implementation of the below avoidance and minimization measures, less than significant impacts from relocations pursuant to CEQA are anticipated based on the availability of single family residences that are equal to or better than the displacement properties available for rent or purchase.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures

- Following project approval, Caltrans Right of Way staff would coordinate with affected property owners concerning compensation for loss of property.

- A Relocation Agent would contact all displacees after final environmental approval. The Relocation Agent would ensure that eligible displacees receive their full relocation benefits, including advisory assistance, and that all activities would be conducted in accordance the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (see Appendix C). Relocation resources shall be available to all displacees free of discrimination. At the time of the first written offer to purchase, owner occupants are given a detailed explanation of Caltrans' Relocation Program and Services.

Mitigation Measures

- No mitigation measures are required for Relocations and Real Property Acquisitions.

UTILITIES/EMERGENCY SERVICES

Affected Environment

Telephone, fiber optic, and electrical lines parallel SR-16 throughout the project area. Two natural gas lines cross SR-16 at one location. The Esparto Wastewater Treatment Plant is located east of Esparto and north of SR-16. The Madison Wastewater Treatment Plant is located east of Madison and adjacent to SR-16 to the south. There are also several private wells within the project area.

The Esparto Community Services District (ECSD) operates the Esparto Wastewater Treatment Plant (WWTP) and its citywide collection system. Approximately half of the treatment ponds have been constructed and the other half are planned facilities. This plan is based on the ultimate build-out in Esparto and has been agreed upon by Yolo County and the Regional Water Quality Control Board. Recently the ECSD added several new monitoring wells to monitor groundwater in the vicinity of the treatment plant.

The Madison Services District operates the Madison Wastewater Treatment plant.

The California Department of Forestry and Fire Protection (Cal-FIRE) operates a fire station in Brooks, just west of Cache Creek Casino. Cal-FIRE handles forest fires and other emergencies, primarily on state lands. Emergency services are also provided by the Yolo County Sheriff's Office; the California Highway Patrol; the Capay Valley, Esparto and Madison Fire Protection Districts; and the Rumsey Rancheria Fire Department.

Environmental Consequences

The proposed project may impact electrical, telephone, and fiber optic lines. All affected utilities would be relocated prior to construction. Utility lines would generally be relocated farther away from SR-16 between the CRZ and the new R/W for SR-16.

None of the existing treatment ponds at the Esparto WWTP would be affected by the proposed project. There is no anticipated date for development of any future ponds, as Esparto is not growing at a fast enough pace to dictate the need for these ponds in the near future.

All of the facilities of the Madison Services District, including treatment ponds, service lines, and monitoring wells, are south of SR-16 and should not be affected by the project.

Under post-construction conditions, the proposed project could benefit the public services in the study area, including law enforcement, fire, and emergency services, because existing emergency service provider routes would be enhanced by project improvements, including safety, circulation, and drainage improvements.

CEQA Considerations

With the implementation of the below avoidance and minimization measures, less than significant impacts to utilities and emergency services pursuant to CEQA are anticipated.

Avoidance and Minimization Measures

- All emergency response units in the project area would be notified of the project construction schedule and would have access to SR-16 throughout the construction period.

Mitigation Measures

- No mitigation measures are required for Utilities/Emergency Services

TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

Regulatory Setting

Caltrans, as assigned by the Federal Highway Administration (FHWA), directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally-assisted programs is governed by the USDOT regulations (49 CFR Part 27) implementing Section 504 of the Rehabilitation Act (29 USC 794). FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

Affected Environment

Traffic and Transportation

SR-16 in Yolo County is a two-lane conventional highway with paved shoulder widths that vary from 0 feet to 2 feet. The terrain is generally level to rolling with predominantly agricultural and low-density land uses. CRZ along this corridor generally ranges from 2 feet to 12 feet. The posted speed limit is 55 mph, except in developed areas, where the speed limit is 25-45 mph.

This project is listed in the Caltrans 2012 State Route 16 Transportation Corridor Concept Report (TCCR). A TCCR is a long- term planning document that Caltrans prepares for each highway. The TCCR identifies current and future projects within the next 20 years. In addition, the TCCR includes an ultimate concept, which is the ultimate goal for the highway beyond 20 years. At this time, the ultimate concept for SR-16 for locations 1 and 2 is a two-lane conventional highway and for location 3 is four-lane conventional highway.

This project consists of three locations that Caltrans Traffic Safety has identified along this corridor that have collision rates that are higher than the statewide average for a similar facility.

Traffic Volume

The traffic volumes for SR-16 were taken from the 2013 All Traffic Volumes on California State Highway System provided online by the Traffic and Vehicle Data Systems Unit. (http://traffic-counts.dot.ca.gov/2013all/Route16-20.html)

Traffic Volumes – Peak Hour and Annual Average Daily Traffic

Description	Peak Hour (veh/hr)	Peak Month (veh/day)	AADT (veh/day)
Location 1 & 2:	950	9900	9300
Location 3:			
CR 21A to CR 89	1100	12300	11600
CR 89 to I-505	1500	14400	13600

Collision History

There were 66 collisions reported within the project limits for all three project locations and their associated date ranges[1]. The collision statistics are as follows:

Location 1 (PM 20.5/21.3): 4/1/2006-3/31/2011

Actual Collisions			Actual Rates Per Million Vehicle Miles			Average Statewide Rates Per Million Vehicle Miles**		
Fatal	Fatal + Injury	Total*	Fatal	Fatal + Injury	Total*	Fatal	Fatal + Injury	Total*
0	5	15	0.000	0.31	0.93	0.017	0.28	0.63

Location 2 (PM 23.2/23.5): 4/1/2006-3/31/2011

Actual Collisions			Actual Rates Per Million Vehicle Miles			Average Statewide Rates Per Million Vehicle Miles**		
Fatal	Fatal + Injury	Total*	Fatal	Fatal + Injury	Total*	Fatal	Fatal + Injury	Total*
0	8	13	0.000	1.23	1.99	0.017	0.28	0.63

[1] The date range used to identify collisions at each location is based upon the requirements specified in section 5.4.2 of the *Highway Safety Improvement Program Guidelines* for development of the Safety Index (SI) in order to achieve funding under the 010 Safety Improvement Program. Three, four, or five-year date ranges are selected in order to achieve a minimum threshold of 25 collisions. If 25 collisions cannot be identified in 5 years, then the collision data from the 5-year period is to be used.

Location 3 (PM 28.2/31.6) 4/1/2008-3/31/2011

Actual Collisions			Actual Rates Per Million Vehicle Miles			Average Statewide Rates Per Million Vehicle Miles**		
Fatal	Fatal + Injury	Total*	Fatal	Fatal + Injury	Total*	Fatal	Fatal + Injury	Total*
2	23	38	0.045	0.52	0.85	0.017	0.30	0.70

* All reported collisions including those without fatalities or injuries.
** Statewide averages are determined by "rate groups," which take into account rural vs. urban settings, rolling vs. flat terrain and speed limit differences.

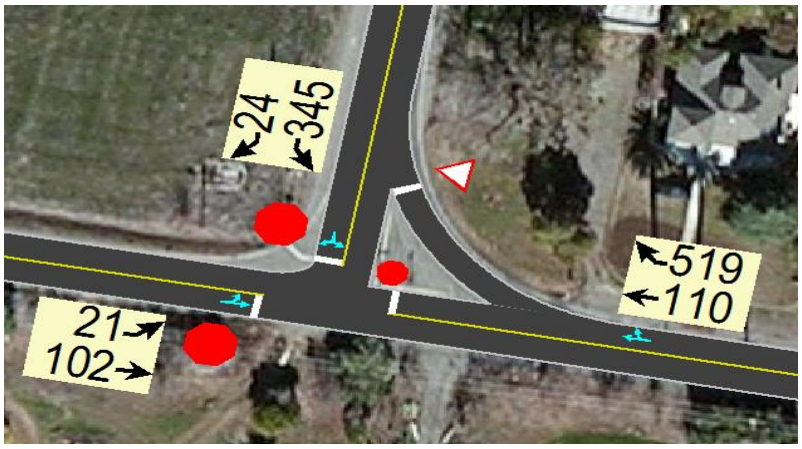
The total collision rate within the project area has improved since 1999-2002 when the collision rate was more than twice the statewide average. Since that time, several minor interim safety improvements have been made in order to reduce the number and severity of vehicular collisions including signage, striping, sight distance improvements, and curve super-elevation improvements. However, the collision data indicates that three locations continue to have higher than average collision rates.

Intersection Traffic Analysis

SR-16/CR-21A

The SR-16/CR-21A intersection is a T intersection that operates under all-way stop control. Three private driveways access the highway within the limits of this intersection. The westbound right turn movement is a free right. There are no other turn lanes at this intersection. Traffic often uses CR-21A and CR-85B to "bypass" Esparto.

State Route 16 & County Road 21A

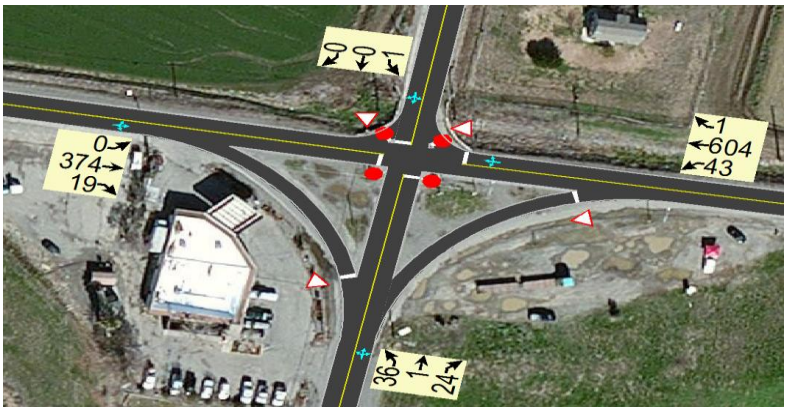


Caltrans uses the California Manual on Uniform Traffic Control Devices (California MUTCD) 2014, which includes signal warrants used to determine the need for a signal. SR-16/CR-21A met four of the nine warrants.

SR 16/CR-89

The SR-16/CR-89 intersection operates under an all-way stop control with a red flashing beacon. There are free right turn movements in the eastbound and northbound directions. There are no other turn lanes at this intersection.

State Route 16 & County Road 89



SR-16/CR-89 met one of the nine signal warrants in the California MUTCD 2014.

Intersection Collision Data

Accidents within the study area were queried from the Traffic Accident Surveillance and Analysis System (TASAS), a Caltrans program used to track vehicle accidents, for a three-year period from April 1, 2007, to March 31, 2010.

3-Year Accident Data (April 1, 2007 to March 31, 2010)

Location	Number of Accidents				Accident Rates					
					Actual Per million vehicle miles			Average per million vehicle miles		
	Total*	Fatal	Injury	F+I	Fatal	F+I	Total*	Fatal	F+I	Total*
03-YOL-16 PM 28.266 & Co. Rd. 21A	3	0	1	1	0.000	.08	.24	0.003	.07	.16
03-YOL-16 PM 31.032 & Co. Rd. 89	7	0	3	3	0.000	.19	.44	0.005	.20	.60

*Total accidents include fatalities and injuries, plus property damage only accidents.

The three accidents at County Road 21A include two broadsides and a hit object. Four of the seven accidents at County Road 89 were rear end accidents. The other three accidents were a head-on, a sideswipe, and a hit object.

The Peak Hour levels of service were calculated for the State Route 16/County Road 89 intersection for the following scenarios:

- 2014 – Existing conditions
- 2018 – Project Construction Year: Signal, Roundabout and No-Build
- 2023 – Near Term Year: Build and No-Build (5 years after project completion)
- 2038 – Design Year: Signal, Roundabout, and No-Build

Peak Hour Level Of Service (LOS) Summary – County Road 89

SR 16/County Road 89	2014		2018		2023		2038	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
No Improvements	E	38 sec	F	55 sec	F	56 sec	F	57 sec
Signalize Intersection			B	11 sec	A	9 sec	B	14 sec
Install Roundabout			B	11 sec	B	15 sec	E (2034)	48 sec

Level of service for unsignalized intersections is reported for the movement with the worst level of service. The westbound approach currently operates at a level of service E in the peak hour. Analysis shows that the intersection would operate with an acceptable level of service with a signal through the design year. A roundabout would operate with an acceptable level of service through 2034 in the peak hour, based on a conservative analysis.

Environmental Consequences

Proposed Improvements

All three locations have the proposed features of eight foot paved shoulders, a 20 foot CRZ and shoulder rumble strips.

Increased Shoulder Width

Shoulders increase safety by providing a stable, clear recovery area for drivers who have left the travel lane. If a driver inadvertently leaves the lane or is attempting to avoid a crash or an object in the lane ahead, a firm, stable shoulder greatly increases the chance of safe recovery. Increasing the shoulder width from 1 foot to 8 feet is projected to reduce collisions by 38 percent according to the Transportation Research Board's *Highway Safety Manual.*

Shoulder Rumble Strips

According to the *Federal Highway Administration, Technical Advisory T5040.39, Revision 1,* rumble strips are designed primarily to assist distracted, drowsy, or otherwise inattentive drivers who may unintentionally drift over the edge line. For this set of drivers, the audible and vibratory warning produced by rumble strips greatly improves the opportunity for a safe recovery. Shoulder or edge line rumble strips are one of the proven countermeasures that reduce the risks of run-off-road crashes.

National Cooperative Highway Research Program (NCHRP) Report 641 documents milled shoulder and edge rumble strips to provide statistically significant reductions in single-

vehicle run-off-road injury crashes: by 10 to 24 percent on rural freeways, and 26 to 46 percent on two-lane rural roads.

Clear Recovery Zone (CRZ)

The Caltrans Traffic Safety Manual states “An area clear of fixed objects adjacent to the roadway is desirable to provide a recovery zone for vehicles that have left the traveled way. Studies have indicated that on high-speed highways, a clear width of 30 feet from the edge of the traveled way permits about 80 percent of the vehicles leaving the roadway out of control to recover. Therefore, 30 feet should be considered the minimum, traversable clear recovery area for freeways and high-speed expressways. High-speed is defined as operating speeds greater than 45 mph.

On most conventional highways, a 30-foot clear zone distance may be difficult to justify for engineering, environmental or economic reasons. For these reasons, a minimum, traversable clear recovery area of 20 feet on conventional highways is advised.”

Location Specific Improvements

Location 1

The project proposes to flatten (increase the radius of the existing horizontal curve to meet the current Caltrans design standard for the proposed speed limit. By creating a curve with a design speed that matches the roadway speed limit, the Project will not require drivers to adjust vehicle speed in the curve, thereby reducing the potential of a driver to lose control in the curve.

Left-turn lanes are proposed for both directions on SR-16 at CR-79 to allow for safer turning movements. This improvement is expected to reduce the number of rear-end collisions at this intersection by removing stopped left turning vehicles from the through traffic lanes.

Location 2

As with Location 1, the project proposes to flatten both the existing horizontal curve and a vertical curve to help the roadway alignment better meet driver expectations, thereby reducing the potential of a driver to lose control in the curve. In addition, wider shoulders and an improved CRZ will increase a drivers ability to recover.

Location 3

A Traffic Analysis Report for this location was completed in December 2014 to determine appropriate intersection control at CR-21A and at CR-89.

State Route 16/County Road 21A

This project proposes to change the intersection control at SR-16/CR-21A. Congestion occurs at this intersection in the PM peak hour. A roundabout was proposed and analyzed at this intersection as part of Esparto's Downtown Revitalization Plan. The roundabout analysis done by Yolo County's engineering consultant showed that a roundabout would operate acceptably at this intersection. However, due to right-of- way and access issues, the project delivery team (PDT) determined that a roundabout is not the appropriate improvement for this location Instead, a traffic signal was analyzed and is now planned for this intersection.

A TWLTL is recommended on SR-16 from just east of CR-21A to just east of CR-86. A TWLTL can serve as a median refuge allowing drivers to cross one direction of traffic and then merge when there is an adequate gap.

State Route 16/County Road 89

This project proposes to also change the intersection control at SR-16/CR-89, as congestion occurs at this intersection in the PM peak hour as well.

Design Option A

Widening and adding a traffic signal at the SR-16/CR-89 intersection.

Per Section 405.9 of the Caltrans Highway Design Manual, two-lane state highways may be widened to two through lanes in each direction at an intersection when signals are installed. The additional lanes through an intersection could improve safety by allowing some of the through vehicles to pass slower moving vehicles and would reduce the lengths of queues, which would reduce the potential for rear-end collisions. Slow-moving farm vehicles and buses are common on SR-16 in this area. Widening to two lanes in each direction at an all-way stop will realize some of the same benefits.

Intersection lighting will be included as part of the improvements at SR-16/CR-21A as well as at SR-16/CR-89.

Design Option B

A single-lane roundabout is at the SR-16/CR-89 intersection in Madison. Although as a result the peak hour delay may be slightly higher than that for a signal, there would be less delay throughout the rest of the day. Additionally, for safety projects such as this one, the FHWA supports the modern roundabout as safer than traditional signalized intersections.

Overall, roundabouts operate more efficiently, often have lower life cycle costs and result in increased fuel efficiency.

The publication, Roundabouts-An Informational Guide (NCHRP 672) states, “The use of roundabouts is a proven safety strategy for improving intersection safety by eliminating or altering conflict types, reducing crash severity, and causing drivers to reduce speeds as they proceed into and through intersections. Decreased vehicle speeds will also decrease the speed differentials with other road users.”

Design Option C

Widening and maintaining the existing all-way stop at the SR-16/CR-89 intersection.

Widening to two lanes in each direction at an all-way stop will realize some of the same benefits as widening to two lanes at the signalized intersection.

Traffic and Transportation

The proposed project does not add additional vehicular capacity and is not expected to appreciably affect traffic volumes. No permanent negative impacts to traffic are anticipated. The project does not contain design elements, such as additional travel lanes, which would provide additional highway capacity. However vehicles are expected to experience fewer delays since drivers turning left at country roads would no longer block traffic. The posted 55 mph speed limit on SR-16 would not be changed by the proposed project.

Pedestrian and Bicycle Facilities

Within the project limits, there are no pedestrian facilities on the existing roadway. Pedestrians can be seen using a path along the south side of SR-16 in Madison between the Migrant Housing Center, which is slightly detached from the community, and the gas station/convenience store in town.

Within the project limits, SR-16 is classified as a Class III Bikeway (bike route). A Class III Bikeway is a road designated for shared use by both bicyclists and motorists. SR-16 would continue to function as a Class III bike route, and no physical improvements related to this proposed project will impact this Class III Bikeway.

Caltrans’ TCCR for SR-16 encourages the development of bike lanes on the highway (Class II Bikeways) from CR-85B to I-505 within the project limits; however, that is outside the scope of this proposed safety project. The widened shoulders provided for in this project would provide more room than is currently available for bicycles. After the completion of this

safety project, Caltrans and Yolo County may work together at a later time to determine if a Class II bike route is appropriate.

FHWA Technical Advisory T5040.35 states in part:

Safe accomodation of all road users should be considered when designing and applying rumble strips. Rumble strips are primarily a saftey device for passenger vehicles. For other road users, particularly bicyclists, they may cause concerns. Bicyclists, in particular, are affected by edge line and shoulder rumble strips. Where shoulders are clear of debris, bicyclists will often choose to use them to avoid conflicts with faster moving vehicles in the travel lane; however, as legal road users, they may also be in the travel lane. Two measures that can be considered to accomodate bicyclists are: 1) Provide gaps in continous rumble strips (typically 10 to 12 ft between 40 to 60 foot long sections) and 2) Offset of the rumble strip from the lane can be adjusted to accommodate bicyclists. This may mean using edge line rumble strips to provide addtional paved shoulder space beyond the rumble strip.

Construction Impacts

Construction of the proposed project would temporarily affect traffic. The first stage of construction would build half of the proposed alignment while traffic stays on the existing road. The next stage would move traffic to the newly constructed portion of the road while the old roadbed is removed and the remainder of the new alignment is constructed. Staged construction would provide convenience and safety to both the traveling public and the workers who will build the project.

CEQA Considerations

Less than significant impacts to traffic and transportation and bicycle facilities pursuant to CEQA are anticipated.

Avoidance and Minimization Measures

With the implementation of the below avoidance and minimization measures, no adverse impacts to traffic and transportation and bicycle facilities are anticipated during construction.

The following Traffic Management Plan elements should be considered:

- Restrictions on when lanes may be closed.
- Public notices and press releases provided in local newspapers before major stage or traffic shifts.

- A Construction Zone Enhanced Enforcement Program (COZEEP) with the CHP during major construction that affects traffic, such as stage changes and traffic shifts.

- Changeable message signs to alert motorists to unusual or new conditions and any delays that develop.

Mitigation Measures

- No mitigation measures are required for Traffic and Transportation/Pedestrian and Bicycle facilities.

VISUAL/AESTHETICS

Regulatory Setting

CEQA establishes that it is the policy of the State to take all action necessary to provide the people of the State "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities" (California Public Resources Code (PRC) Section 21001(b)).

Affected Environment

A Visual Impact Assessment (VIA) was completed in April 2014. The project region is rural in character. The route winds through farms, orchards, ranches, vineyards, and passes through the towns of Madison, Esparto and Capay. The valley floor is gently sloping to flat, and is framed by rolling hills of the California inner coastal range landform.

At the town of Capay, the hills rise above the valley floor approximately 1800 feet to the northwest, and 3000 feet to the southwest. The views range from enclosed and restricted by both vegetation and landform to sweeping vistas of farmland, oak woodlands and distant hills. The orientation of the Capay Valley is from northwest to southeast and widens to approximately a mile across out to the Sacramento Valley floor.

The original plant communities include annual grasslands, Blue oak woodland, Valley foothill riparian, and Valley foothill hardwood conifer. Wet meadows and seasonal wetlands are visible from the roadway. The rolling hills are sculpted and defined by the actual hydrological systems such as swales and creeks. The average rainfall in the region is between 20 and 25 inches per year. The major water resource for the area is Cache Creek, which lies to the north and roughly parallels SR 16. Cache Creek would not be directly affected by the proposed project.

The vegetation and habitat types within the environmental study limit (ESL) include agricultural fields, row crops, orchards, annual grassland, Valley oak riparian habitat and blue oak woodland.

Blue oak woodland habitat in the study area consists primarily of blue oak (*Quercus douglasii*) with minor amounts of interior live oak (*Quercus wislizenii*) and foothill pine (*Pinus sabiana*). Poison oak shrubs (*Toxicodendron diversilobum*) and annual grasses including wild oat, soft chess, ripgut brome and hare barley occur on the forest floor.

Valley oak riparian habitat in the study area is dominated by Valley oak (*Quercus lobata*) trees. Understory species include wild grape (*Vitus californica*), wild rose (*Rosa californica*), Himlayan blackberry (*Rubus discolor*), blue elderberry (*Sambucus mexicana*), poison oak (*Toxicodendron diversilobum*), perennial ryegrass (*Lolium perenne*), and velvet grass (*Holcus lanatus*). Common herbaceous species that occur in the understory include miner's lettuce (*Claytonia perfoliata*), white sweetclover (*Melilotus alba*), and common monkeyflower (*Mimulus guttatus*).

The project work locations are within the valley bottom of the Capay Valley. The west end of the project site has rolling hills visible on both sides. Oak woodlands are visible on the hillsides, while the immediate foreground is a variable rural landscape. The characteristic variations include a mix of houses, barns and fences, outbuildings, rows of trees adjacent to the roads, and open views of orchards, fields and vineyards. Although the creek is adjacent to the roadway in places, it is not necessarily visible to drivers because the creek bed is very deeply incised.

The eastern end of the project site travels from the town of Capay towards I-505, from Capay to the east the long views are of the agriculture of the Sacramento Valley. A number of rural homes have views of the roadway.

Environmental Consequences

This project, as proposed, would change the visual resources within and adjacent to the existing alignment for all three locations. These resources contribute to the rural character of the route. All vegetation within the project limits of the roadway alignment, shoulders, and the 20-foot CRZ on both sides of the roadway would be removed to accommodate the construction work and proposed safety zones. The CRZ includes shoulders, and provides areas for errant vehicles to regain control. For a conventional highway, the minimum desirable width for the CRZ is 20 feet. Vegetation may be removed from the CRZ to the right-of-way to accommodate utilities, maintenance vehicle pullouts, and access. The removal of the existing vegetation would affect the current visual character and interest of the roadway by moving the natural and planted vegetation further away from the roadway

edge. This would open new views to the distant hills, agricultural land, residences and business but will decrease the close roadside views of vegetation and habitat that characterizes a conventional highway.

Special Circumstances For Location 1

Realignment will bring the roadway into closer proximity to existing residences in Location 1 near the intersection of SR-16 and CR-79. The existing buffer and vegetated screens between the roadway and residences will be reduced or eliminated. The new alignment would include the development of new horizontal and vertical curves. Intersections of county roads and driveways would also be realigned, moved or created. With the new alignment the headlight sweep patterns would change, new areas would be affected by an increase of light and glare.

At Location 1 (PM 20.5 to 21.3), depending on which option is used in the construction, the project may have an impact along the area of Taylor Creek where riparian trees and vegetation could be affected. Option “A” would shift the alignment north to avoid a house and Option “B” would shift the alignment south to reduce impacts to Taylor Creek. If Option “A” is incorporated into the construction phase, the impacts to the creek will need to be minimized through re-vegetation of the riparian ecosystem. Minimization measures will need to be implemented to address the visual concerns. This would cause a major, short term visual impact to the roadway, but over a few years the impacts will be reduced. If Option “B” is built the visual impacts would be less than that of Option “A”, but, will still require re-vegetation efforts to restore the landscape to a more natural-looking environment.

SR-16 in all three project locations is not eligible for State Scenic Highway status.

CEQA Considerations

With the implementation of the below avoidance and minimization measures, less than significant impacts with mitigation to visual/aesthetics pursuant to CEQA are anticipated.

Avoidance and Minimization Measures

- The application of erosion control to all disturbed areas will be required. These areas shall be returned to their preconstruction conditions once construction is completed. The erosion control shall consist of a seed mix of grasses and forbs that are native to the area.

- If Option B (part of location 1) is built the Landscape Architecture Division will design a landscape and erosion control plan.

- Tree removal that occurs along or near residential development shall be replanted in kind with the type of trees and vegetation that has been removed. This will provide screening for residences to help reduce light and glare, and to help reestablish and maintain the rural feel of the surrounding area.

- Similar ornamental variety or native trees shall replace large trees that need to be removed due to construction activities so long as they do not interfere with roadway functions or utilities. Re-vegetation within clear recovery zones would consist of native grasses and shrubs to facilitate sight distance requirements, reduction of obstacles and erosion concerns.

Mitigation Measures

- If Design Option "A" (part of location 1) is built, Caltrans shall design and prepare a re-vegetation plan (RP) which would serve to minimize impacts. The plan shall be jointly prepared by a landscape architect and biologist. The RP would include measures to replace existing native riparian vegetation that will be removed or indirectly affected by construction of the proposed project. The RP shall include planting concepts, specifications, riparian restoration and wetland planting plans, plant species, sizes and quantities. The Caltrans project biologist would take the lead on the RP with the help of the Caltrans Landscape Architecture staff to design a conceptual plan for the RP.

CULTURAL RESOURCES

Regulatory Setting

"Cultural resources" as used in this document refers to all "built environment" resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance.

Historical resources are considered under CEQA, as well as PRC Section 5024.1, which established the California Register of Historical Resources. In addition, PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places (NRHP) listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

Affected Environment

An Historic Property Survey Report (HPSR) was completed in July 2014 due to the potential for cultural resouces within the project area.

The Area of Potential Effects (APE) was established through consultation between the Caltrans Project Manager, Project Engineer, and the Caltrans Professionally Qualified Staff (PQS) on June 5, 2014. The APE encompasses the area within which direct or indirect impacts associated with the proposed highway project could cause alterations in the character or use of any historic property, if present.

Historical research and field surveys within a preliminary study area were conducted by consultants in May 2002. The original preliminary study area was much larger than the current project's APE.

The HPSR identified one historic-era archaeological site that is within the APE and Area of Direct Impacts (ADI) for the proposed project. Portions of this site in the ADI were previously determined non- contributing for listing to the NRHP with concurrence by the SHPO in 2005. Excavations were conducted at previously unevaluated portions of that site in 2014, with intact deposits identified approximately 12 inches below the ground surface. Subsequent to the archaeological excavations, design changes for the proposed project have removed this site from the ADI. It is also not eligible for the California Register of Historic Places.

Additionally, six previously identified cultural resources are located within the APE. The eligibility of the six sites is addressed in the Historic Resource Evaluation Report (HRER) completed in 2005. Three of the sites in the project's APE were previously found not eligible for National Register of Historic Places (NRHP) with concurrence by the SHPO in 2005, therefore precluding further cultural resources management for these resources. Portions of two additional sites within the project's ADI were determined non-contributing for listing to the NRHP with concurrence by the SHPO in 2005. It is also not eligible for the California Register of Historic Places.

Environmental Consequences

Caltrans has determined that this proposed project would have no adverse effect to state-owned archaeological sites, landscapes, non-structural resources within the APE that meet National Register and/or California Historical Landmarks Register eligibility criteria and has provided notice and summary to SHPO pursuant to PRC Section §5024(f).

Caltrans PQS staff has determined that there are resources in the project area that were previously determined not to meet National Register of Historic Places or California Register of Historical Resources criteria**,** as outlined in CEQA Guidelines 15064.5(a), that the prior determination remains valid, and they are not historical resources for purposes of CEQA.

Caltrans PQS staff has determined that for historical resources, there would be no substantial adverse change because the impacts to historical resources within the Project Area limits would be avoided through the establishment of Environmentally Sensitive Areas (ESAs). The ESA's will be marked on the plans as areas to be avoided by the contractor.

CEQA Considerations

With the implementation of the below avoidance and minimization measures, less than significant impacts to cultural resources pursuant to CEQA are anticipated.

Avoidance and Minimization Measures

- The portions of the cultural sites outside the ADI would be protected against inadvertent damage during project construction through the establishment of ESA and preparation of an ESA Action Plan. The ESA Action Plan will ensure proper implementation of Section 106 Programmatic Agreement Stipulation X, and to ensure compliance with CEQA, and for state-owned historic properties, PRC Section §5024.

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

- If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the district archaeologist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Mitigation Measures

- No mitigation measures are required for Cultural Resources.

Physical Environment

HYDROLOGY AND FLOODPLAIN

Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

A Floodplain Evaluation Report Summary and a Floodplain Hydraulic Study were completed in July 2014.

At Location 1, SR-16 is above the base floodplain based on the current Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (June 2010 FIRMs) for Yolo County, however, Taylor Creek would need to be realigned and stabilized with Rock Slope Protection (RSP) for both Option A and B which would constitute a longitudinal encroachment of FEMA FIRM Zone A.

At Location 2, there are no impacts to floodplains.

At Location 3, SR-16 is currently below the elevation of the 100-year floodplain between the town of Esparto and the I-505 interchange. The road routinely floods during storms. SR-16 in this location is primarily a longitudinal encroachment of the base floodplain FEMA FIRM Zone A, AE, AO and X. SR-16 is considered a transverse encroachment of the South Fork Willow Creek at Bridge Number (Br. No.) 22-0093 (PM 29.42).

Environmental Consequences

The proposed project would encroach on the floodplain at the following locations:

- Taylor Creek, PM 20.56-20.64 and PM 20.73 -20.90-Longitudinal Encroachment
- Taylor Creek and County Road 79, PM 20.86- Longitudinal Encroachment
- SR-16 near the South Fork of Willow Slough, PM 28.20-28.27 and PM 28.27-31.82 – Transverse Encroachment

The profile of SR-16 would not be significantly altered except to standardize the vertical curve at the South Fork Willow Creek at Bridge No. 22-0093. This might result in a modest increase in the profile of SR-16 near the existing bridge. The primary means of flooding along the south side of SR-16 in this vicinity is from overtopping of the South Fork Willow Creek which flows generally west to east, parallel to the highway. The primary means of flooding on the north side of SR-16 in this vicinity is from overtopping of Lamb Valley Slough and South Fork Willow Slough north which flows generally west to east parallel to the highway. As flood levels increase during a 100-year flood event, the water surface would rise above SR-16 east of the vertical curve and backup to the west without creating a substantial impact to the water surface elevation north or south of SR-16.

At Location 1 for Option A, the existing 15-foot Corrugated Structural Steel Plate Pipe (CSSPP) under CR-79 would be removed and a new 15-foot CSSPP or equivalent will be placed under CR-79 along the revised creek alignment which will constitute a longitudinal encroachment of FEMA FIRM Zone A.

At Location 2, there are no impacts to floodplains.

At Location 3, the embankment of Taylor Creekwill need to be stabilized with RSP.

The Floodplain Evaluation Report Summary and Technical Information for Location Hydraulic Study forms prepared for this project concluded that the project would not constitute a significant floodplain encroachment and would pose no additional risk to adjacent properties.

CEQA Considerations

Less than significant impacts to hydrology and floodplains pursuant to CEQA are anticipated.

Avoidance, Minimization, and/or Mitigation Measures

- No Avoidance, Minimization and/or Mitigation measures are required for Hydrology and Floodplain.

WATER QUALITY AND STORM WATER RUNOFF

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source[2] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

[2] A point source is any discrete conveyance such as a pipe or a man-made ditch.

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of the USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's Section 404 (b)(1) Guidelines (40 CFR Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent[3] standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., such as groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined and this definition is broader than the CWA definition of "pollutant". Discharges under the Porter-Cologne Act are

[3] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions, and then set criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollution Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). The U.S. EPA defines an MS4 as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water.” The SWRCB has identified Caltrans as an owner/operator of an MS4 pursuant to federal regulations. The Caltrans MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans MS4 Permit, Permit was adopted on September 19, 2012, and became effective on July 1, 2013. (Order No. 2012-011-DWQ.) The permit has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);

2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) BMPs, to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Stormwater Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit (Order No. 2009-009-DWQ), adopted by the SWRCB on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites which result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre must comply with the provisions of the Construction General Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with Caltrans Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Affected Environment

A Water Quality Assessment (WQA) was completed in July 2013. Yolo County has a Mediterranean climate characterized by hot, dry summers and temperate, wet winters. However, the county receives a marine air influence from the Delta region to the south that moderates the temperature extremes of the Central Valley. During the summer months (June–August), average daily high temperatures are in the mid-90s Fahrenheit (ºF) and average daily low temperatures are in the mid-50s. During the winter months (December–February), average high temperatures are in the 50sºF and average lows are 38–40ºF. Virtually all precipitation falls as rain, between November and April in most years. Annual rainfall typically ranges from 16 to 22 inches, and the average annual air temperature is 60–62°F. The frost-free season is 230–280 days throughout the year (Yolo County Planning Department 2005).

The proposed project lies within two Undefined Hydrologic Sub Area (HSA), 511.30 & 511.20 which are in Lower Putah Creek Hydrologic Area (HA) of the Valley Putah-Cache Hydrologic Unit (HU) in the Sacramento River Hydrologic Region (HR). The average annual rainfall is about 19.4 inches. Cache Creek, Taylor Creek, Willow Creek, Salt Creek, Saltroy Creek, Mass Creek, Winters Creek and Willow Slough are water bodies within the project limits. The water bodies mentioned are seasonal and, with the exception of Cache Creek, are not on the state's 303(d) list of impaired water bodies.

The drainage in the project from post mile PM 20.5 to approximately PM 26.3 is carried to Cache Creek from Taylor Creek, Mass Creek, Salt Creek, Willows Creek and Winters Creek via sheet flow onto agricultural lands, or direct flow into road side ditches and culverts. Cache Creek is on the 303d list of impaired waterbodies because of mercury. Drainage from PM 26.3 to the end of the project is carried into agricultural lands, roadside ditches, and Willow and Cottonwood sloughs.

The Cache Creek watershed and, to a significantly greater extent, the Harley Gulch and Sulphur Creek watersheds are naturally enriched in mercury. The lowest concentration of mercury in soil in the watershed, as observed in areas distant from mines or springs, is in the range 0.1-0.2 mg/kg, dry weight. Regional Water Quality Control Board staff considers 0.2 mg/ kg to be the regional background mercury concentration (CalEPA 2005). The Basin Plan also defines areas of elevated levels of total mercury, "hot spots," as areas with a concentration of 0.4 mg/ kg or greater in the fraction of sample that passes a 0.063 mm screen (silt and clay fractions). To control erosion of soils containing elevated levels of mercury, these areas must first be identified for their mercury content and erosion potential.

The receiving water bodies from the storm water runoff from this project area are Cache Creek, Taylor Creek, Willow Creek, Salt Creek, Mass Creek, Winters Creek, Willow Slough and Cottonwood Slough. The Construction General Permit (GCP) requires Caltrans to implement BMPs to control erosion on mercury-enriched soils (0.4 mg/kg) in the upper watershed of Cache Creek. The following numeric allocations for acceptable annual loads apply in the these reaches: Cache Creek (Clear Lake to North Fork confluence) 11 grams/year; North Fork Cache Creek 12.4 grams/year; Harley Gulch to Camp Haswell 0.04 grams/year; Davis Creek 0.7 grams/year; Bear Creek at Hwy 20 3 grams/year; within channel production and ungauged tributaries 32 grams/year; and finally Cache Creek at Yolo, California, 39 grams/year; which is the reach adjacent to this project. Central Valley Regional Water Quality Control Board (CVRWQCB) recommends aggressive and redundant erosion and sediment control for this area to protect beneficial uses of water bodies.

Caltrans in 2006 entered into a contract to develop a sampling program to identify locations with elevated levels of total mercury within the highway rights-of-way, including SR-16 from the Colusa County line to County Road 95 west of Woodland PM 0.0 to 37.5 (37.5 miles).

Sampling activities were conducted from June 24, 2006 through July 13, 2006. A total of 195 samples and 20 duplicate samples were collected.

The study located elevated levels of total mercury in seven quarter-mile segments along SR-16. Nearly all of the high concentration samples were very close to stream banks. Locations or segments of potential elevated mercury within the project limits include:

Start PM	End PM	Result (mm Hg/kg soil)	Notes
Loc 1 20.5/21.3	20.75	0.41	Near Water; Bare soil, some erosion present
Loc 3 28.2/31.6	28.25	0.67	Near Water; Bare soil, some erosion present

Environmental Consequences

Potential Impact on Water Quality Standards

The proposed project would be adding approximately 32 acres of net new impervious surface by adding 8-foot shoulders to each side of the roadway. Impervious surfaces are mainly artificial structures, such as pavements, roads, sidewalks, driveways and parking lots that are covered by impenetrable materials such as asphalt, concrete, and brick. Soils compacted by development are also highly impervious. Additional impervious surfaces result in an increase in stormwater runoff and pollutants in surrounding areas.

This additional impervious area should be relatively insignificant considering the large watershed areas that contributes to the individual creeks. Ultimately, the storm water quality may be improved by the proposed project with drainage improvements and implementation of permanent treatment BMPs.

Potential for Creation of Substantial Additional Sources of Polluted Runoff

The proposed project is not expected to increase the traffic volumes in the project area and the impact of additional aerially deposited particles on the receiving water quality is not expected to be significant. With the proper implementation of both temporary and permanent BMPs for stormwater treatment and control, the project as planned will not result in the creation of a substantial source of additional polluted runoff. As mentioned in previous sections, the proposed project design would avoid/reduce impacts to receiving waters. Alignments were moved away from longitudinal creeks along the project to minimize impacts

to steep slopes, wetlands, and areas with erosive or unstable soil conditions. Alignments would be moved away from areas with steep slopes to lessen impacts and areas with previously erosive or unstable soil conditions. Bioswales, detention basins, and rock slope protection, would be implemented in this project design with the same intent, and would help to increase infiltration and reduce scouring and erosion along the length of this project.

CEQA Considerations

The project as designed, and with the implementation of permanent and temporary BMPs, is expected to have less than significant impacts to water quality and storm water runoff pursuant to CEQA.

Avoidance and Minimization Measures

To comply with the Statewide NPDES Storm Water Permit, Caltrans developed a statewide SWMP. The SWMP describes the minimum procedures and practices that Caltrans uses to reduce the pollutants it discharges into storm drainage systems owned or operated by Caltrans. It outlines procedures and responsibilities for protecting water quality at Caltrans facilities, including the selection and implementation of BMPs. This selection and implementation of both temporary construction and permanent treatment BMPs is conducted through the completion of a Stormwater Data Report (SWDR), which is completed during the various stages of the design process by the project engineer. The practices outlined in the SWMP and Statewide Storm Water Practice Guidelines ensure that certain minimum design pollution prevention features are incorporated into projects to maintain or improve water quality. The key elements are as follows:

- Prevent Downstream Erosion – design of drainage facilities to avoid causing or contributing to downstream erosion. Drainage outfalls, when appropriate, will discharge to suitable control measures.
- Stabilize Disturbed Soil Areas – design will incorporate stabilization of disturbed areas (when appropriate) with seeding, vegetative, or other types of cover.
- Maximize Existing Vegetative Surfaces – design will limit footprints of cuts and fills to minimize removal of existing vegetation.
- This project incorporates treatment BMPs to the maximum extent practicable with an emphasis on biofiltration swales and detention basins.
- The contractor will be responsible for implementing stormwater BMPs pursuant to Construction General Permit (CGP) and the SWPPP required by the permit to

ensure that erosion and run-off does not contribute to additional pollutants in surface water bodies in the vicinity of this project. Implementing BMPs will minimize soil transportation during construction. Redundant placement of BMPs in areas that are tributaries to Cache Creek, especially at creek crossings, or in areas with elevated levels of mercury will provide additional protection.

- No soil disturbing work will be performed during the wet season (October 15th – April 15th). This will reduce the likelihood of discharges from the site.

- This will be a multi-year project and it will be necessary to ensure that BMPs have been fully implemented during the wet season to stabilize slopes and prevent erosion, especially in the vicinity of surface water bodies.

- Clearing and grubbing (digging up roots and stumps) will be done in the dry months of the year (April 15th – October 15th) to reduce the likelihood of erosion occurring during and immediately following construction of the project. Revegetation of disturbed surfaces will be in accordance with plans developed by a Caltrans Landscape Architect. Preservation of existing vegetation to provide erosion and sediment control benefits has been maximized on this project. Contract plans will delineate ESAs to help preserve existing vegetation.

- The placement of Rock Slope Protection (RSP) to currently unstable slopes, as well as the addition of detention basins, swales, and other stormwater design improvements are being implemented into this project to ultimately improve the water quality of the creeks within the project limits.

- The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit No. 000003 (Order No. 2012-0011-DWQ), issued by the SWRCB.

- The contractor is required to prepare a SWPPP containing effective erosion and sediment control measures. These measures must address soil stabilization practices, sediment control practices, tracking control practices, and wind erosion control practices. In addition, the project plan must include non-storm water controls, waste management, and material pollution controls. It is generally accepted that practices that perform well by themselves can be complemented by other practices to raise the collective level of erosion control effectiveness and sediment retention.

- This project will have at least 1 acre of Disturbed Soil Area (DSA) and is subject to the Construction General Permit. A Notification of Construction (NOC) will be submitted to the CVRWQCB, Sacramento Office at least 30 days prior to construction.

- Standard Special Provision (SSP) 07-345 is a set of specifications used for projects that disturb more than one acre of soil. SSP 07-345 would be included in the construction specifications for this project and would clearly outline the Contractor's responsibilities with respect to preparation and implementation of the SWPPP.

- In accordance with the MS4 NPDES general permit as directed by Caltrans SWMP and the Project Planning and Design Guide (PPDG) an evaluation of the project using the most recent approved evaluation guide is essential in determining if the incorporation of permanent storm water runoff treatment measures shall be considered for this project. This evaluation has been conducted through the completion of a SWDR.

- This work may require the dewatering of irrigation ditches. Irrigation water is a conditionally exempted discharge under the Caltrans permit and is not prohibited if identified as not being sources of pollutants to receiving waters or if appropriate control measures are developed and implemented under the SWMP to minimize the adverse impacts of such sources. The project will coordinate with CVRWQCB through the Caltrans NPDES coordinator to ensure any dewatering performed during this project conforms to these (NPDES permit) provisions.

- The project will utilize and enhance existing natural biostrips and bioswales whenever possible. Biostrips will be incorporated into the roadway design throughout the project limits wherever gentle slopes allow. Bioswales will be incorporated into ditch design wherever the longitudinal slope, soil conditions, proper shape, and vegetation can be obtained.

- Caltrans will comply with all conditions listed in the 401 Certification.

Mitigation Measures

- No mitigation measures are required for Water Quality and Storm Water Runoff.

HAZARDOUS WASTE/MATERIALS

Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as "Superfund," is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires clean up of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

Affected Environment

An updated Initial Site Assessment (ISA) was prepared by Caltrans North Region Environmental Engineering staff in January 2014. In addition, a Site Investigation (SI) was prepared in June 2010. The ISA was based on reviews of the project plans, mapping and previous intitial site assessments prepared in November 2007 and in January 2009.

Environmental Consequences

Caltrans determined from the SI that hazardous levels of lead and chromium are known to exist in the yellow color traffic stripes. Since these traffic stripes will be cold planned along with the roadway, the levels of lead and chromium will become non-hazardous.

These grindings (which consist of the roadway material and the yellow color traffic stripes) shall be removed and disposed of in accordance with Standard Special Provision 15-1.03B (Residue Containing High Lead Concentration Paints) which requires a Lead Compliance Plan (LCP).

Non-hazardous levels of lead are known to exist in the white traffic striping. As such, these grindings shall be removed and disposed of in accordance with Standard Special Provision (SSP) 15-1.03B (Residue Containing High Lead Concentration Paints) which requires a Lead Compliance Plan (LCP).

Lead-contaminated soils may exist within and near Caltrans R/W due to the historical use of leaded gasoline, leaded airline fuels, and waste incineration.

CEQA Considerations

Less than significant impacts from hazardous waste/materials pursuant to CEQA are anticipated with the avoidance and minimization measures.

Avoidance and Minimization Measures

- Any R/W that is going to be acquired would be tested for potential soil contamination prior to acquisition. Soils with non-hazardous levels of ADL may be reused within the project limits. Soils with hazardous levels of ADL would be disposed of at an appropriate landfill.

- SSP 15-1.03B regarding the removal of white and yellow thermoplastic paint striping is required.

Mitigation Measures

- No mitigation measures are required for Hazardous Waste/Materials.

Biological Environment

NATURAL COMMUNITIES

Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Affected Environment

A Natural Environmental Study (NES) was completed in September 2014. Vegetation communities within the study area were classified based on plant community descriptions provided in "A Guide to Wildlife Habitats of California" (Mayer and Laudenslayer, eds, 1988), "A Manual of California Vegetation" (Sawyer and Keeler-Wolf, 1995), and "Preliminary Descriptions of the Terrestrial Natural Communities of California" (Holland, 1986).

Annual Grassland Habitat

Annual grassland habitat occurs on the flat plains and rolling foothills of the project area. The grasslands are dominated by introduced annual grasses, including wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), and hare barley (*Hordeum murinum* ssp. *leporinum*).

Annual grassland occurs at all three proposed work areas. Due to the grassland occuring between the roadway and either development or active farmland it provides very limited habitat value. There may be the presence of common wildlife but based on the findings during field surveys the area has low habitat value.

Valley Oak Riparian Habitat

Valley oak riparian habitat in the study area is dominated by valley oak (*Quercus lobata*) trees. Understory species include wild grape (*Vitus californica*), wild rose (*Rosa californica*), Himlayan blackberry (*Rubus armeniacus*), blue elderberry (*Sambucus mexicana*), poison oak (*Toxicodendron diversilobum*), perennial ryegrass (*Lolium perenne*), and velvet grass (*Holcus lanatus*). Common herbaceous species that occur in the understory include miner's

lettuce (*Claytonia perfoliata*), white sweetclover (*Melilotus alba*), and common monkeyflower (*Mimulus guttatus*).

Valley oak riparian habitat occurs in areas with relatively shallow water tables along natural watercourses. Valley oaks in these forests grow in relatively dense stands, forming a well-developed overstory canopy. The valley oak riparian habitat has one of the most complex forest structures of any forest type in California. Valley oaks grow in a complex association of deciduous trees such as box elder, Oregon ash, and black walnut. A dense shrub layer of California blackberry, willow, and wild rose forms the lowest canopy level. Climbing vines of wild grape climb occur across all of the canopy layers [Source: Yolo County Oak Woodland Conservation and Enhancement Plan (2007)].

Wildlife species commonly associated with valley oak riparian habitat includes western toad (*Bufo boreas*), pacific chorus frog (*Pseudacris regilla*), western aquatic garter snake (*Thamnophis couchi*), red-shoulder hawk (*Buteo lineatus*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*) and raccoon (*Procyon lotor*).

Location 1 has 3.66 acres (76 oaks) of valley oak riparian habitat along Taylor Creek within the ESL.

At Location 2, there is Valley oak riparian habitat adjacent to the environmental study limit (ESL) but not within the potential area of affect.

Location 3 has no Valley oak riparian habitat within the ESL.

Environmental Consequences

Annual Grassland

Annual grassland will be temporarily and permanently impacted at all three proposed work locations. Based on the biological evaluation, these areas provide very limited habitat value.

Valley Oak Riparian Habitat

Valley Oak Riparian Habitat is limited in occurrence to Location 1. Disturbance in this area would include the clearing of vegetation for temporary access and construction; preparation, grading and construction of temporary access roads and staging areas, and their subsequent extensive use by heavy equipment and trucks; falsework construction; and soil stockpiling.

Permanent impacts may occur as a result of roadway construction and improvements. The maximum extent of valley oak woodland removal is 3.66 acres or 76 oak trees. Additional trees/shrubs will potentially be removed at Location 1 (Taylor Creek). These include the following: English walnut (*Juglans regia*) (approx. 47 trees), Western redbud (*Cercis occidentalis*) (9), interior live oak (25), willow sp. (13), California buckeye (*Aesculus californica*) (8), toyon (*Heteromeles arbutifolia*) (4), California rose (3), cottonwood (*Populus deltoides*) (21), blue elderberry (15), California grape (6), mugwort (*Artemisia vulgaris*) (4), milkweed (*Asclepias* sp.) (12), Dutchmen's pipe (*Aristolochia* sp.) (2), gray pine (*Pinus sabiniana*) (6).

CEQA Considerations

Less than significant impacts with mitigation to valley oak riparian habitat pursuant to CEQA are anticipated with implentation of the following avoidance, minimization and/or mitigation measures.

Avoidance / Minimization Measures

- Areas of Valley oak riparian habitat within the project area that are not directly affected would be designated as ESAs on the project plans and in the project avoidance specifications. The boundaries of the ESA would be clearly marked in the field by the installation of a temporary fence. ESAs would be implemented as a first order of work and will remain in place until all construction activities are complete.

- Removal of native vegetation would be confined to the minimal area necessary to facilitate construction activities.

Mitigation Measures

- Mitigation to restore Valley oak riparian habitat will be performed as identified in the Lake and Streambed Alteration Agreement in coordination with the California Department of Fish and Wildlife to compensate for the loss of Valley oak riparian habitat, regulated under sections 1600-1616 of the Fish and Game Code.

- Upon completion of project construction, the loss of 76 valley oak trees at Taylor Creek would be mitigated on-site within Caltrans right-of-way. If planting cannot be accomplished on-site due to placement of Rock Slope Protection (RSP)/armouring along banks in stream area, or if there is a general lack of suitable planting area, offsite mitigation options would be pursued.

- Disturbed areas will be re-contoured to the natural grade and re-vegetated with Valley oak seedlings and other native species appropriate for the site conditions.

WETLANDS AND OTHER WATERS

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 USC 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the USACE with oversight by the U.S. EPA.

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with the U.S. EPA's Section 404(b)(1) Guidelines (40CFR Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a LEDPA to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency, such as the FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCB) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for additional details.

Affected Environment

An NES and a Wetland Delineation were completed in September 2014. All potentially jurisdictional wetlands, Waters of the U.S. and Waters of the State, were identified and mapped according to provisions of sections 401 and 404 of the CWA and sections 1600-1616 of the California Fish and Wildlife Code.

Wetlands

One potentially jurisdictional wetland was identified within the ESL, which occurs at Location 3, South Fork Willow Slough, near Oakdale Ranch Lane on the northside of the highway.

The area within the ESL is approximately 0.04 acres. This wetland occurs on the channel banks of South Fork Willow Slough. This slough carries agricultural water which it receives from Winters Canal (outside of project limits) and supports seasonal flows through agricultural fields. The slough also conveys irrigation runoff from adjacent farmlands and receives stormwater from agricultural ditches.

Vegetation in this wetland area consists of sandbar willow (*Salix exigua*), broad-leaved cattail (*Typha latifolia*), willow weed (*Polygonum lapathifolium*), rusty flatsedge (*Cyperus odoratus*), and cocklebur (*Xanthium strumarium*). Adjacent uplands vegetation includes milk thistle (*Silybum marianum*), yellow star thistle (*Centaurea solstitialis*), wild radish (*Raphanus sativas*), and black mustard (*Brassica nigra*).

There are five potentially non-jurisdictional wetlands within Location 3. These are man-made agricultural ditches created in upland areas that carry irrigation water to crops, and contain wetland characteristics because they serve to convey water from one place to another. The total acreage is 1.25 acres.

Other Waters

Surface water systems in the project area consist of several ephemeral or intermittent tributaries to Cache Creek.

Taylor Creek is considered other waters as it does not meet the criteria of wetlands. There is approximately 0.71 acre of waters associated with Taylor Creek within the ESL. Taylor creek does have Valley oak riparian habitat associated with its banks and high flow areas. The creek itself has limited habitat value and a lack of fish species because it is an ephemeral stream that does not provide appropriate aquatic resources.

The other water feature located at South Fork Willow Slough was historically a natural creek that has been channelized to convey precipitation and groundwater during the rainy season and irrigation flows during the growing season.

Environmental Consequences

There are no wetland features in Locations 1 or 2.

Within Location 3, construction of the proposed project would permanently impact approximately 0.04 acre of potentially jurisdictional wetlands in South Fork Willow Slough and approximately 1.25 acres of potentially non-jurisdictional wetlands that are Waters of the State in five agricultural ditch locations. There will be temporary impacts to approximately 0.28 acre of potentially jurisdictional wetlands. Temporary impacts would

occur along the banks of the previously mentioned agricultural ditches as these ditches are being replaced in-kind immediately adjacent to their current locations.

Other Waters

Temporary impacts to approximately 0.28 acres of potentially jurisdictional wetlands, and temporary disturbance to approximately 2.75 acres of jurisdictional other waters of the U.S. would occur.

CEQA Considerations

Less than significant impacts with mitigation to wetlands and other waters pursuant to CEQA are anticipated. However, mitigation is required under the Section 404 USACE permit to compensate for the loss of wetlands and other waters of the U.S.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures

- Where working areas encroach on live or dry streams, or wetlands, RWQCB-approved physical barriers adequate to prevent the flow or discharge of sediment into these systems would be constructed and maintained between working areas and streams and wetlands. During construction of the barriers, discharge of sediment into streams would be held to a minimum. Discharge would be contained through the use of RWQCB-approved measures to keep sediment from entering protected waters.

- Oily or greasy substances originating from the Contractor's operations would not be allowed to enter or be placed where they will later enter tributary waters.

- Asphalt concrete would not be allowed to enter tributary waters.

- Wetlands, other waters of the U.S., and waters of the state would be delineated as ESAs on the project plans and in the project specifications. The boundaries of the ESA would be clearly marked in the field by the installation of a temporary fence. ESAs would be implemented as a first order of work and would remain in place until all construction activities are complete.

Mitigation Measures

- If necessary, mitigation for jurisdictional wetlands and other waters of the U.S. would be performed to achieve no net loss of the functions and values within the study area

in accordance with the USACE Habitat Mitigation and Monitoring Proposal Guidelines (1991) and the Guidelines for Monitoring Riparian Mitigation (1994).

- The proposed project would permanently impact approximately 0.04 acre of potentially jurisdictional wetlands which would be mitigated on-site at a 1:1 ratio by creating wetlands as part of the pending consultation with USACE. The proposed project would also have indirect impacts to approximately 0.28 acre of potentially jurisdictional wetlands of the US, which would be mitigated on-site at a 1:1 ratio by restoring wetlands as part of the pending consultation with USACE.

- The proposed project would permanently impact approximately 0.98 acre of other waters of the U.S., and approximately 1.43 acres of waters of the State in Taylor Creek and a portion of South Fork Willow Slough, which would be mitigated on-site at a 1:1 ratio by creating vegetated buffers along the other impacted waterways in the study area. Temporary disturbance to 2.75 acres of jurisdictional other waters of the U.S. and waters of the State would also occur and those impacts would be mitigated on-site at a 1:1 ratio by restoring vegetated buffers along disturbed waterways.

PLANT SPECIES

Regulatory Setting

The USFWS and CDFW have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 USC, Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Wildlife Code, Section 2050, et seq. Department projects are also subject to the

Native Plant Protection Act, found at California Fish and Wildlife Code, Section 1900-1913, and CEQA, PRC, Sections 2100-21177.

Affected Environment

An NES was completed in September 2014. In order to comply with the provisions of various state environmental statutes and executive orders, the study area or ESA was field reviewed to 1) identify habitat types; 2) identify factors indicating the potential for special status plant species; 3) identify special status plant species present; and 4) identify potential impacts resulting from the proposed project.

The following information was studied as part of the environmental review process for special status plant species:

- California Natural Diversity Database (CNDDB) Records
- CDFW BIOS Database
- California Native Plant Society (CNPS) Database

Field surveys were conducted by Caltrans biologists on December 14, 2012, and May 3, August 23, and November 19, 2013. The most current USFWS species list for the proposed project was obtained on June 3, 2015.

Environmental Consequences

Neither the biological databases nor the field study reports indicate that any special status plant species are present within the project. Agricultural fields are the most abundant cover type, and occur within the ESL at all three project locations. Various crops such as canning tomatoes, sunflowers, whet, corn, safflower, almonds, walnuts, grain and alfalfa are rotated throughout the year. Croplands are generally associated with orchards, vineyards and rural residential residential areas. Pastures are interspersed with adjacent cropland and orchards and consist of perennial grasses and legumes planted on flat and gently rolling terrain for livestock.

The proposed project would have no effect on any special status plant species.

CEQA Considerations

No impacts to special status plants pursuant to CEQA are anticipated.

Avoidance, Minimization, and/or Mitigation Measures

- There are no avoidance,minimization and/or mitigation measures proposed for plant species.

ANIMAL SPECIES

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The USFWS, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and the CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

An NES was completed in September 2014. In order to comply with the provisions of various State environmental statutes and executive orders, the ESA was field reviewed to 1) identify factors indicating the potential for special status animal species; 2) identify special status animal species present; and 3) identify potential impacts resulting from the proposed project.

The following information was analyzed as part of the environmental review process for special status animal species:

- California Natural Diversity Database (CNDDB) Records
- CDFW BIOS Database

Field surveys were conducted by Caltrans biologists on December 14, 2012, and May 3, August 23, and November 19, 2013. The most current USFWS species list for the proposed project was obtained on June 3, 2015.

Western Red Bat

Western red bats (*Lasiurus blossevillii)* are one species of several in the genus Lasiurus that are commonly referred to as "tree bats" because they roost only in tree foliage. The western red bat is also known as the desert red bat. This species is a typical tree bat, which is closely associated with cottonwoods in riparian areas at elevations below 6,500 feet. Especially favored roosts are found where leaves form a dense canopy above and branches do not obstruct the bats' flyway below. Western red bats are also known to roost in orchards, especially in the Sacramento Valley of California. Despite their bright amber color, these bats are actually rather camoflaged, resembling dead leaves when they curl up in their furry tail membranes to sleep.

Bats typically feed along forest edges, in small clearings, or around street-lights where they prefer moths. It is not known exactly where desert red bats hibernate, though they may burrow into leaf litter or dense grass like their eastern counterparts, and they do move to milder coastal areas in the Pacific Northwest. Although largely undocumented, desert red bats appear to have declined markedly in the West due to the loss of lowland riparian forests (Bat Conservation International, 2013). These bats do have the potential to occur in the project area.

Structure Nesting/Roosting Species/Bats

Existing bridges and box culverts within the study area provide suitable habitat for structure nesting/roosting species such as migratory swallows and some species of bats such as the Mexican free tailed (*Tadarida brasiliensis*), little brown (*Myotis lucifugus*), pallid (*Antrozous pallidus*), and big brown (*Eptesicus fuscus*).

The cliff swallow is a fairly common migratory bird species that forms large nesting colonies on box culverts and bridges. When access to suitable habitat is prevented at one colony, cliff swallows leave the area and join nesting colonies elsewhere. Suitable habitat for cliff swallows is widely available in and around the project area, and there are numerous nesting colonies in the Central Valley.

This species has been observed at both of the South Fork Willow Slough Bridges, one within Location 3, and the other just east of the project limits. Other bridges along this section of SR-16 that provide appropriate nesting habitat for this species include bridges over Salt Creek, Saltroy Creek, and Willow Creek; however, these are not within the project limits.

Migratory Birds-Vegetation Nesting Species

Migratory birds including the black phoebe were detected in the project area. Other migratory birds have the potential to nest in the project area.

Burrowing Owl

The burrowing owl is a California species of special concern. Burrowing owls prefer open, dry grassland and deserts. The nesting season is between February 1 and August 31. Nests are typically located in abandoned rodent burrows, particularly California ground squirrel (*Spermophilus beecheyi*), which they modify each year. Burrowing owls forage in open grassland areas adjacent to nest sites. The species have also been documented in open areas near human habitation, especially airports and golf courses. The Central Valley and surrounding foothill regions of California provide year-round habitat for burrowing owl.

Annual grassland habitat, agricultural fields (cropland), and orchard-vineyard habitat within/adjacent to the project area could provide potential suitable foraging and nesting habitat for burrowing owls. While the project limits could provide potential habitat for this species, the amount and quality of habitat is not high.

Environmental Consequences

Western Red Bat

No western red bats were observed within the study area during surveys. As this species has numerous foraging and breeding resources immediately adjacent to project limits, no further surveys were conducted.

Migratory Birds-Vegetation Nesting Species

While vegetation-nesting species have the potential to occur within the project area, the proposed project is not expected to have an adverse effect on these species with the implementation of the avoidance and minimization measures.

Structure Nesting/Roosting Species/Bats

Existing bridges and box culverts within the study area provide suitable habitat for structure nesting/roosting species such as migratory swallows and some species of bats such as the Mexican free-tailed (*Tadarida brasiliensis*), little brown (*Myotis lucifugus*), pallid (*Antrozous pallidus*), and big brown (*Eptesicus fuscus*).

The cliff swallow is a fairly common migratory bird species that forms large nesting colonies on box culverts and bridges. When access to suitable habitat is prevented at one colony, cliff swallows leave the area and join nesting colonies elsewhere. Suitable habitat for cliff swallows is widely available in and around the project area, and there are numerous nesting colonies in the Central Valley. This species has been observed at both of the South Fork Willow Slough Bridges. One is located within Location 3, and the other bridge is located just outside of project limits to the east. Other bridges along this section of SR 16, but not within project limits, that provide appropriate nesting habitat for this species include Salt Creek Bridge, Saltroy Creek Bridge, and Willow Creek Bridge.

Burrowing Owl

Burrowing owls were not detected in the study area during field surveys, and the CNDDB (2014) search provided no records for burrowing owls occurring in the study area. While potential suitable habitat could be present within project limits, the habitat available would be a minimal amount, and not of high quality. It would be unlikely that this species would occur within project limits.

CEQA Considerations

Less than significant impacts to western red bats pursuant to CEQA are anticipated.

Less than significant impacts to migratory birds-vegetation nesting species pursuant to CEQA are anticipated.

Less than significant impacts to tri-colored blackbirds pursuant to CEQA are anticipated.

Less than significant impacts to structure nesting/roosting migratory birds and bats pursuant to CEQA are anticipated.

Less than significant impacts to borrowing owls pursuant to CEQA are anticipated.

Avoidance and Minimization Measures

Structure Nesting/Roosting Species/Bats

- To avoid potential impacts to nesting swallows or roosting bats, exclusionary devices would be installed where feasible to prevent nesting or roosting on box culverts and bridges within the project area. The installation of the exclusionary devices would occur during the fall or winter after fledging and before initiation of breeding activities (between September 1st and February 14th). A biological monitor would periodically inspect the exclusionary devices to ensure effectiveness.

- Nest removal is another method of preventing structure nesting/roosting species. CDFW considers February 15 to September 1 to be the swallow nesting season. Old nests or nests under construction would be washed down with water or knocked down with a pole. Swallows are strongly attracted to old nests or to the remnants of deteriorated nests, so all traces of mud would need to be removed. Because cliff swallows persistently rebuild nests for most of the breeding season, the nest removal method would require many consecutive days to prevent them from nesting using this method.

Migratory Birds-Vegetation Nesting Species

- Removal of native vegetation would be confined to the minimal area necessary to facilitate construction activities.

- Vegetation removal on the project site will be conducted between September 1st and February 14th, outside of the nesting season (generally) for most migratory bird species in the project area. If vegetation removal must take place outside of this period, a qualified biologist would conduct pre-construction surveys for active bird nests within 0.25 mile of all construction activities. These surveys would be conducted no less than 14 days and no more than 30 days before the beginning of construction. If construction activities are delayed or suspended for more than 30 days after the pre-construction survey, the areas would be resurveyed. If no active bird nests are found, no further measures are necessary. If active bird nests are identified, construction activities within 500 feet of these areas would be postponed until USFWS and/or CDFW have been consulted, or after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site. No known active nests would be disturbed without permit or other authorization from the USFWS and/or the CDFW.

Structure Nesting/Roosting Species/Bats

- To avoid potential impacts to nesting swallows or roosting bats, exclusionary devices would be installed where feasible to prevent nesting or roosting on box culverts and bridges within the project area. The installation of the exclusionary devices would occur during the fall or winter after fledging and before initiation of breeding activities (between September 1st and February 14th). A biological monitor would periodically inspect the exclusionary devices to ensure effectiveness.

- Nest removal is another method of preventing structure nesting/roosting species. CDFW considers February 15 to September 1 to be the swallow nesting season. Old nests or nests under construction would be washed down with water or knocked down with a pole. Swallows are strongly attracted to old nests or to the remnants of deteriorated nests, so all traces of mud would need to be removed. Because cliff swallows persistently rebuild nests for most of the breeding season, the nest removal method would require many consecutive days to prevent them from nesting using this method.

Burrowing Owl

- The avoidance and minimization measures for migratory birds would be applied to minimize the potential to impact the burrowing owls that may inhabit the project area prior to construction.

Mitigation Measures

- There are no mitigation measures proposed for these species.

THREATENED AND ENDANGERED SPECIES

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA, are required to consult with the USFWS and the NOAA Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of

Concurrence and/or documentation of a No Effect finding. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The CDFW is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the CDFW. For species listed under both the FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Affected Environment

An NES was completed in September 2014. In order to comply with the provisions of various State and Federal environmental statutes and executive orders, the study area or ESA was field reviewed to 1) identify habitat types; 2) identify factors indicating the potential for threatened and endangered species; 3) identify threatened and endangered species present; and 4) identify potential impacts resulting from the proposed project.

The following information was analyzed as part of the environmental review process for threatened and endangered species:

- California Natural Diversity Database (CNDDB) Records
- CDFW BIOS Database

Field reviews were conducted by Caltrans biologists on December 14, 2012, and May 3, August 23, and November 19, 2013. The most current USFWS species list for the proposed project was obtained on September 22, 2014.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (or VELB) is federally listed as a threatened species (FR 45:52803). The VELB occurs in remnants of riparian and elderberry savanna habitats in the Central Valley and foothill locations. The VELB larvae feed solely on elderberry shrubs (*Sambucus* spp.). The larvae are woodborers and feed internally in the roots and main stems of elderberry. Elderberry shrubs stems that are greater than 1.0 inch in diameter at ground level are required for the beetle to complete its life cycle. Adults feed on the flowers and foliage of elderberry. Adult beetles are active when the elderberry is in flower, usually between mid-March through mid-June. Adult beetles have generally been observed in areas where there is other associated riparian vegetation, especially larger trees. The beetle prefers riparian habitat in the valley with dominant plant species including cottonwood, sycamore, valley oak, and willow, with an understory of elderberry shrubs (USFWS 1991). There is potential for VELB to occur in the project area.

Within the study areas, Valley oak riparian habitat along Taylor Creek (Location 1), and non-riparian habitat in Location 2 support elderberry shrubs, which provide suitable habitat for the VELB. Sixteen closely grouped elderberry shrubs were identified within the study area in Locations 1 and 2, but no elderberry shrubs were observed within project limits in Location 3. No VELB were observed during surveys, however, old exit holes were observed in four shrubs at Taylor Creek.

Giant Garter Snake

The giant garter snake (*Thamnophis gigas*) (GGS) is federally and state listed as threatened. The GGS feeds primarily on small fishes, tadpoles, and frogs. Habitat requirements consist of adequate water during the snake's active season (early-spring through mid-fall) to provide food and cover; emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; grassy banks and openings in waterside vegetation for basking; and higher elevation uplands for cover and refuge from flood waters during the snake's dormant season in the winter. The GGS occurs in agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley (CDFW 2000; USFWS 2003).

The GGS occupies small mammal burrows and other soil crevices above prevailing flood elevations throughout its winter dormancy period. The breeding season extends through March and April, and females give birth to live young from late July through early September (USFWS 2003).

Historically, the range of the GGS consisted of the San Joaquin Valley from the vicinity of Sacramento and Antioch southward to Buena Vista and the Tulare Lake Basin. The current distribution extends from near Chico, Butte County, to the vicinity of Burrel, Fresno County (CDFW 2000).

Waterways within the study area include: Taylor Creek, South Fork Willow Slough, and minor irrigation drainage ditches. Of these, only South Fork Willow Slough and an associated irrigation drainage ditch provide suitable GGS habitat within the study area. Taylor Creek conveys storm water runoff during the rainy season only and does not contain water during the active period of the GGS.

Biological studies identified and mapped 0.61 acre of suitable GGS habitat within the study area. There is potential for GGS to occur in the project area, though no GGS were detected during field surveys.

Yolo is among the 11 counties where the GGS is still presumed to occur. Within the Yolo Basin, Willow Slough provides suitable habitat for the GGS. The CNDDB database search did not provide any records of occurrence in the Brooks, Esparto, or Madison quadrangles or in the South Fork Willow Slough. The nearest known occurrences are located 15 miles east outside the study area in Willow Slough southeast of Woodland, and in Willow Slough Bypass northeast of Davis.

Swainson's Hawk

The Swainson's hawk is a migratory bird protected under the Federal Migratory Bird Treaty Act. In California, it is a listed threatened species.

Swainson's hawks typically nest in tall, densely covered trees located adjacent to suitable foraging habitat. Trees most commonly used in the Central Valley include valley oak, Fremont cottonwood, walnut, and large willows (Salix sp.) (Estep 1989). Nest trees are most commonly located in riparian woodlands adjacent to open grassland or agricultural lands. Nests may also be located in roadside trees and in isolated trees or clumps of trees in open terrain. The location of the nest site adjacent to suitable foraging habitat appears to be one of the most important criteria for occupancy of the nest territory (Estep 1989). Swainson's hawks exhibit a high rate of nest territory re-occupancy. However, use of

alternative nests within the territory is common. Swainson's hawk may use an alternate nest in a different tree or, less often, may construct a new nest in the same tree.

Swainson's hawks breed from southern Canada, through the western U.S., and into northern Mexico. In California, Swainson's hawk were once found throughout lowland California and were absent from only the Sierra Nevada, north coast ranges, Klamath Mountains, and portions of the desert region of the state (Grinnell and Miller 1986). Nesting pairs of Swainson's hawks have been greatly reduced throughout much of this historic range. Currently, nesting territories are restricted to portions of the Central Valley and Great Basin regions of the state (Estep 1989). Swainson's hawks arrive in California between early and mid-March to begin breeding activities.

The selection of foraging habitat by the Swainson's hawk is considered to be a function of prey density as well as prey availability. Alfalfa is considered to be one of the more favorable cultivated foraging habitats, largely due to the sequence of monthly mowing and weekly flood irrigation that makes it a crop type of high prey availability for the duration of the breeding season. Newly disked fields, fallow fields, dry-land pasture, beets, tomatoes, and irrigated pasture have also been identified as preferred cover types. Rangelands, riparian systems, vineyards, orchards, oak woodlands, cotton, asparagus, onion fields, and developed areas are seldom used for foraging.

Swainson's hawks have been observed foraging in fields adjacent to Location 3 of the proposed project, and CNDDB records indicates the presence of Swainson's hawk nests within 1 mile of the proposed project. Swainson's Hawk nesting surveys will be conducted during breeding season prior to the beginning of construction activities.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is currently listed as endangered under the California endangered species act as of December 2014. They are common locally throughout the Central Valley (Zeiner et al. 1990). Tricolored blackbirds breed near fresh water, preferably in emergent wetland habitat containing tall, dense cattails or tules; they also breed in thickets of willow, blackberry, wild rose, and tall herbs (Zeiner et al. 1990). This species feeds in grassland and cropland habitats, mostly on insects and spiders, seeds, and cultivated grains (i.e., rice and oats), and forages on ground in croplands, grassy fields, flooded lands, and along pond edges (Zeiner et al. 1990).

Their nests are located over or near fresh water, typically in emergent wetland habitat or hidden nearby on the ground among low vegetation. The nests are composed of mud and plant materials. The tricolored blackbird is a highly colonial species. Suitable nesting habitat must be large enough to support a minimum colony of about 50 pairs. The nesting

colonies are vulnerable to massive nest destruction by mammalian and avian predators, including Swainson's hawks (Zeiner et al. 1990).

Cropland, orchard-vineyard, valley oak riparian, and fresh emergent wetland habitats may provide suitable foraging habitats for the tricolored blackbird. These blackbirds have the potential to occur in the project area for foraging purposes, but it does not provide appropriate nesting habitat for this species.

Environmental Consequences

Valley Elderberry Longhorn Beetle

Potential impacts to the VELB could occur due to the direct removal or modification of 16 elderberry shrubs (86 stems over 1 inch at ground level) as a result of construction in Locations 1 and 2.

Construction of the project at Location 1 would remove a total of approximately 15 elderberry shrubs containing 82 stems that are 1.0 inch or greater in diameter at ground level. Four of the elderberry shrubs had exit holes (see table below). Work at location 2, near CR-82B, would directly impact one shrub with four stems over one inch at ground level. No exit holes were observed.

Indirect effects would include the clearing of vegetation for temporary access and construction; preparation, grading and construction of temporary access roads and staging areas, and their subsequent extensive use by heavy equipment and trucks; falsework construction; and soil stockpiling. These actions could temporarily impact 3 of the elderberry shrubs included in the Location 1 count, which are located within the project study limits.

Potential indirect effects to the VELB would include potential physiological stress to the beetle and lowered reproduction rates. Potential indirect effects to the VELB may be experienced during construction activities that could cause disruption of normal behavior patterns or result in avoidance of habitat by the VELB.

Caltrans determined that the proposed project could affect the VELB and submitted a Biological Assessment (BA) to USFWS based on the build alternative. Caltrans is currently in consultation with the USFWS and an approved Biological Opinion (BO) is expected in Winter of 2015. The most recent elderberry shrub count was conducted on November 17, 2013 to look for any new elderberry shrubs in the study area. No new occurrences were observed.

Potential Impacts to Suitable VELB Habitat

Project Segment	elderberry shrubs (and stems) affected
Location 1	15 (82)
Location 2	1 (4)
Totals	**16 shrubs (86 stems)**

Giant Garter Snake

Caltrans is currently in consultation with the USFWS and an a approved Biological Opinion (BO) is expected in Winter of 2015.

Construction would directly impact approximately 0.61 acre of GGS habitat (0.27 acre of aquatic habitat (South Fork Willow Slough) and 0.34 acre (roadside ditch) of upland habitat). These impacts would be classed as 'Level 1' effect category in the USFWS 1997 "Programmatic Biological Opinion on the Effects of Small Highway Projects on the Threatened Giant Garter Snake in Butte, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo and Yuba Counties, California (Snake Programmatic Consultation)".

Caltrans is currently in consultation with the CDFW and an application for a 2081 permit will be submited prior to construction if needed. All conditions of the BO and 2081 permit would be adhered to.

Swainson's Hawk

Potential impacts to the Swainson's hawk consists of the direct removal or modification of suitable habitat. Project construction would result in approximately 30.82 acres of potential impacts to foraging habitat, however, abundant foraging and nesting habitat is directly adjacent to the project limits. No nesting trees were observed within project limits during field surveys. If a nesting tree is discovered prior to construction, a Section 2081 Incidental Take Permit from CDFW would be obtained prior to construction to authorize the incidental take of the Swainson's hawk should project construction disturb the birds and cause them to potentially abandon their young.

Tricolored Blackbird

Tricolored blackbirds were not observed in the study area during field surveys. Results of field surveys indicate that while there may be a small amount of potential foraging habitat for this species. In addition, this species has not been observed within project limits per CNDDB 2014 records, and it is unlikely they would occur within project limits.

CEQA Considerations

With mitigation, less than significant impacts to the valley elderberry longhorn beetle pursuant to CEQA are anticipated.

With mitigation, less than significant impacts to the giant garter snake pursuant to CEQA are anticipated.

Avoidance and Minimization Measures

Valley Elderberry Longhorn Beetle

- Before initiation of any vegetation removal, grading, or any other ground-disturbing activities, a qualified biologist would conduct mandatory worker awareness training for all construction personnel. The awareness training would provide information on how to avoid impacts to biological resources, particularly special-status species. The training would also inform workers of the penalties for not complying with mitigation requirements. If new construction personnel are subsequently added to the project, they too would receive the training.

- Prior to any ground-disturbing activities associated with the project, Caltrans shall install 20 feet of 4-foot-tall temporary, plastic mesh construction ESA fence where possible, from the driplines of elderberry shrubs that are not to be removed. The fencing is intended to prevent encroachment by construction vehicles and personnel. The exact location of the fencing would be determined by a qualified biologist, with the goal of protecting VELB habitat. The fencing would be strung tightly on posts set at a maximum interval of ten feet. The fencing will be installed in a way that prevents equipment from enlarging the work area beyond what is necessary to complete the work. The fencing would be checked and maintained weekly until all construction is completed.

- A sign would mark this buffer zone and state the following ‘This is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines and imprisonment’. The fencing and a note reflecting this condition would be shown on the construction plans. Signs would be legible from a distance of 20 feet and must be maintained for the duration of construction.

Giant Garter Snake

- Construction activity within suitable habitat would be conducted between May 1 and October 1 to minimize impacts to this species. This is the active period for giant garter snakes and thus direct mortality is lessened because snakes are expected to actively move and avoid danger.
- Clearing would be confined to the minimal area necessary to facilitate construction activities. Fencing and signs would designate avoided giant garter snake habitat within or adjacent to the project area as an ESA.
- Construction personnel would receive USFWS-approved worker environmental awareness training. This training instructs workers to recognize giant garter snakes and their habitat(s).
- Twenty-four hours prior to construction activities, the project area would be surveyed for GGS. Surveys of the project area would be repeated if a two-week or greater lapse in construction activity occurs. If a GGS is encountered during construction, activities would cease until appropriate corrective measures have been completed or it has been determined that the giant garter snake will not be harmed. Any sightings and any incidental take would be reported to the USFWS and CDFW immediately by telephone.
- Any dewatered habitat shall remain dry for at least 15 consecutive days after April 15th and prior to excavating or filling of the dewatered habitat.
- After completion of construction activities, any temporary fill and construction debris would be removed and, wherever feasible, disturbed areas restored to pre-project conditions. Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.

Swainson's Hawk

- If there are any new nest trees within the project limits prior to construction, they would be designated as ESAs and would be delineated on the project plans and in the project specifications. The boundaries of the ESA would be clearly marked in the field by the installation of a temporary fence. ESAs would be implemented as a first order of work and will remain in place until all construction activities are complete.

- Before initiation of any vegetation removal, grading, or any other ground-disturbing activities, a qualified biologist would conduct mandatory worker awareness training for all construction personnel. The awareness training would provide information on how to avoid impacts to biological resources, particularly special-status species. The training would also inform workers of the penalties for not complying with mitigation requirements. If new construction personnel are subsequently added to the project, they too would receive the training.

- Removal of native vegetation would be confined to the minimal area necessary to facilitate construction activities.

- The avoidance and minimization measures (tree removal during non-nesting season) for migratory birds would be applied to minimize the potential to impact nesting Swainson's hawk.

- Monitoring for Swainson's hawk would take place as appropriate during construction from March to September.

Tricolored Blackbird

- The avoidance and minimization measures for migratory birds would be applied to minimize the potential to impact the tricolored blackbird. If this species is observed, appropriate resource agencies would be coordinated with.

Mitigation Measures

Valley Elderberry Longhorn Beetle

Caltrans would purchase credits sufficient to compensate for the impacts to 250 elderberry shrubs, and an additional 290 associated native plantings from a USFWS approved conservation bank that services the proposed project area. Credits are purchased via VELB "units." Each unit translates to 10 credits, five for seedlings and five for associated species. Eighty units from a bank would compensate for 800 seedlings and associated species.

Compensatory Mitigation to Offset Project Impacts to Suitable VELB habitat

Location	Stem diameter	Number of Stems Impacted	Exit Holes Present on Shrub (Y/N)	Elderberry Seedling Ratio	Elderberry Seedling Plantings	Associated Native Plant Ratio	Associated Native Plantings
Non-Riparian	1"-3"	4	No	1:1	4	1:1	4
		0	Yes	2:1	0	2:1	0
	3"-5"	0	No	2:1	0	1:1	0
		0	Yes	4:1	0	2:1	0
	> 5"	0	No	3:1	0	1:1	0
		0	Yes	6:1	0	2:1	0
Riparian	1"-3"	26	No	2:1	52	1:1	52
		0	Yes	4:1	0	2:1	0
	3"-5"	15	No	3:1	45	1:1	45
		2	Yes	6:1	12	2:1	24
	> 5"	15	No	4:1	60	1:1	60
		3	Yes	8:1	24	2:1	48

Location	Stem diameter	Number of Stems Impacted	Exit Holes Present on Shrub (Y/N)	Elderberry Seedling Ratio	Elderberry Seedling Plantings	Associated Native Plant Ratio	Associated Native Plantings
Total Elderberry and Associated Plant Species Plantings Needed toward Conservation of the VELB					**197**		**233**

Giant Garter Snake

- Caltrans would restore all 0.61 acre of GGS habitat through the on-site relocation, slope improvement and revegetation of South Fork Willow Slough and irrigation ditch. In addition, a one-year monitoring report showing pre- and post-project area photos would be submitted to USFWS and/or CDFW one year from the restoration implementation. The restoration and monitoring would follow USFWS Guidelines. If the restoration is unsuccessful, as determined by USFWS, consultation would be reinitiated and would include appropriate actions necessary to fulfill the success criteria for restoration of temporary disturbance.

Swainson's Hawk

- Caltrans would purchase credits if necessary for the loss of Swainson's hawk foraging habitat based on the ratios provided in the *Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (CDFW 1994):

- Swainson's hawk nesting activities are expected to occur between March 15th and September 15th. Project impacts within one mile of an active nest tree shall provide one credit for each acre of roadwork authorized (1:1 ratio).

- Project impacts within five miles of an active nest tree but greater than one mile from the nest tree shall provide 0.75 credit for each acre authorized (0.75:1 ratio).

- Project impacts within ten miles of an active nest tree but greater than five miles from an active nest tree shall provide 0.5 credit for each acre authorized (0.5:1 ratio).

INVASIVE SPECIES

Regulatory Setting

The FHWA guidance issued August 10, 1999, directs the use of the State's invasive species list currently maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the NEPA analysis for a proposed project.

Affected Environment

An NES was completed in July 2014. Vegetation communities within the study area were classified based on plant community descriptions provided in "A Guide to Wildlife Habitats of California" (Mayer and Laudenslayer, eds, 1988), "A Manual of California Vegetation" (Sawyer and Keeler-Wolf, 1995), and "Preliminary Descriptions of the Terrestrial Natural Communities of California" (Holland, 1986).

Invasive weeds are the predominant species along the roadsides and within Caltrans rights-of-way. Noxious weed species observed include Italian thistle (*Carduus pycnocephala*), yellow star thistle (*Centaurea solstitialis*), field bind weed (*Convolvulus arvensis*), dodder (*Cuscuta* sp.), Bermuda grass (*Cynodon dactylon*), tumbleweed (*Salsola tragus*), Johnson grass (*Sorghum halapense*), and puncture vine (*Tribulus terrestris*).

Habitat Vulnerability to Noxious Weed Infestation

Ground disturbance associated with construction poses a high risk for the spread of noxious weeds into native habitats from ruderal roadside vegetation and cultivated fields along SR-16. The grasslands, wetlands, Valley oak riparian, and blue oak woodland habitats (outside of project limits) are highly vulnerable to the spread of noxious weeds.

Environmental Consequences

Non-Project-Dependent Vectors

Farm workers, recreationists, and others can carry noxious weed seeds into the project area on clothing and tools. Wildlife and domestic animals, especially dogs, often vector noxious weed seeds in their coats. These potential noxious weed vectors are not expected to increase as a result of the proposed project activities.

Habitat Alteration Expected as a Result of the Project

Construction of the project would result in new cut/fill slopes, removal of woodland canopy coverage and vegetated ground cover, and areas of disturbance associated with construction staging and access roads, resulting in a net increase in disturbed roadside area, and a reduction in shade. Noxious weed sources were detected in habitats in the study area and could move into newly disturbed areas. Habitat modification as a result of project construction represents a high risk for the infestation and spread of noxious weeds. If left untreated, the newly disturbed areas would provide optimal conditions for noxious weeds.

Increased Vectors as a Result of Project Implementation

Project induced vectors include weed seed brought in on tools, workers' vehicles, and on project workers' clothing and boots. The potential for spreading existing noxious weed infestations on workers' clothing boots, tools, and vehicles is high.

None of the species on the California list of invasive species is currently used by Caltrans for erosion control or landscaping.

CEQA Considerations

Less than significant impacts from invasive species pursuant to CEQA are anticipated with the implementation of the avoidance and minimizations measures.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures

- All construction equipment would be clean of potential noxious weed sources (mud, vegetation) before entering the project area, to help ensure noxious weeds from outside of the project area are not introduced into the project area.
- Equipment would be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material.
- Only native plant species appropriate for the project area would be used in any erosion control or revegetation seed mix or stock. Certified weed-free straw would be required where erosion control straw is to be used. In addition, any hydro-seed mulch used for revegetation activities must also be certified weed-free.
- Non-native plant control would consist of mechanical or spot chemical treatments of the selected most invasive plant species listed by the United States Department of Agriculture (USDA), California Exotic Pest Plant Council (CEPPC), and the California Invasive Plant Council (CALIPC) that if left untreated, would dominate the onsite revegetation area.

Mitigation Measures

- No mitigation measures are required for Invasive Species.

Construction Impacts

Temporary Air Quality and Noise Impacts During Construction

The construction of roadway improvements could generate temporary air quality impacts (e.g., increase in diesel fumes and dust) and noise impacts from heavy equipment operations. From a human environment perspective, the impacts would be most pronounced in the parts of the project area where developed land uses are adjacent to or near the project site.

Air Quality

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM_{10}, would be the primary short-term construction impact, and may be generated during excavation, grading and hauling activities. However, both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature and minimized with the following:

- Caltrans Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C “Emission Reduction” and Section 14-9.03 “Dust Control”. Provision 14-9.02 “Air Pollution Control” requires the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the Yolo-Solano Air Quality Management District. These statutes can be found at: http://www.ysaqmd.org/documents/CEQAHandbook2007.pdf

Noise

During construction noise may be generated from the contractors’ equipment and vehicles. Caltrans requires the contractor to conform to the provisions of Standard Specification, Section 14-8.02 “Noise Control":

- Noise levels would not exceed 86 dBA LMax at 50 feet from the job site activities from 9 p.m. to 6 a.m.

- Equipment would include an internal combustion engine with manufacturer-recommended muffler.

- An internal combustion engine would not be operated on the job site without the appropriate muffler.

Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines.

Environmental Resources Considered in the Cumulative Effects Analysis

Affected Environment

Biological Resources

The Road Safety Assessment (RSA) considered for assessing incremental impacts to biological resources includes the area within a 1-mile radius of the SR-16 project limits, including the rural towns of Esparto, and Madison. Biological resources considered for cumulative impacts includes VELB, GGS, and Swainson’s hawk foraging habitat.

Development

The following actions were identified that could contribute to the cumulative impacts to biological resources.

Past Actions In The Project Area

- Yocha-De-He Golf Club-18 hole golf course
- Esperanza Estates Residential Subdivision, Esparto (95 units)

Present Actions In The Project Area

- Lopez Residential Subdivision, Esparto (72 units)
- Proposed Caltrans SR-16 Safety Improvement Project

Reasonably Foreseeable Future Actions In The Project Area

- Capay Cottages Residential Subdivision, Esparto area (20 units)
- East Parker Residential Subdivision, Esparto (80 units)
- Orciuoli Residential Subdivision, Esparto area (180 units)
- Storey Residential Subdivision, Esparto area (60 units)
- Deterding Town Center Project, 70-acre mixed-use development site (Adjacent to SR-16 north of Woodland Avenue)
- Esparto New High School
- Kaufman Homes Subdivision (1,335 units) I-505 and SR-16 area
- Esparto Main Street Revitalization (Completed by 2020)

The proposed Cache Creek Casino Expansion project was initially considered but it was deleted because the project was withdrawn from consideration for approval from the county.

Direct and/or Indirect Impacts

Biological Resources

Valley Elderberry Longhorn Beetle (VELB)

Of the projects identified in the RSA, the Yocha-De-He Golf Club, the Esparto New High School, and the proposed Caltrans SR-16 Safety Improvement Project were the only projects that identified potential impacts to the VELB. The Yocha-De-He Golf Club applied measures to avoid impacts to the VELB. The environmental document for the Esparto New High School identified that impacts to the VELB would be avoided.

Giant Garter Snake (GGS)

Of the recent past, present, and reasonably foreseeable future projects, only the proposed Caltrans SR-16 Safety Improvement Project has the potential to impact the GGS or its habitat. The incremental impacts of the proposed project would not be cumulatively considerable.

Tricolored Blackbird

Of the recent past, present, and reasonably foreseeable future projects, only the proposed Caltrans SR-16 Safety Improvement Project has the potential to impact the GGS or its habitat. The incremental impacts of the proposed project would not be cumulatively considerable.

This species has not been observed within project limits per CNDDB 2014 records, therefore, it is unlikely that the incremental impacts of the proposed project would be cumulatively considerable.

Valley Oak Riparian

Of the past, present, and future projects identified in the RSA, the Yocha-De-He Golf Club is the only project that identified impacts to Valley oak trees and Valley oak riparian habitat. The Yocha-De-He Golf Club impacted approximately eight Valley oak trees and 0.15 acre of Valley oak riparian habitat. The impacts were mitigated to reduce the adverse effect to a less than significant level. No other past, present, or future projects have or proposed impacts to Valley oak trees and Valley oak riparian habitat in the RSA.

When viewed in connection with the effects of past, current, and probable future projects, the potential, incremental effects to Valley oak riparian habitat by the proposed SR-16 safety improvement project would not be cumulatively considerable, with mitigation incorporated.

Wetlands and Other Waters

Of the recent past, present, and reasonably foreseeable future projects identified in the RSA, only the Caltrans SR-16 Safety Improvement Project has the potential to impact wetlands and other waters. When viewed in connection with the effects of past, current, and probable future projects, the potential, incremental effects to wetlands and other waters by the proposed SR-16 SIP would not be cumulatively considerable, with mitigation incorporated.

Swainson's Hawk Foraging Habitat

Past Actions In The Project Area

Yocha-De-He Golf Club

The Yocha-De-He Golf Club impacted approximately 190 acres of Swainson's hawk foraging habitat. There are four active Swainson's hawk nests within 6 to 8.5 miles of that project, however, no active Swainson's hawk nest trees were removed. The loss of Swainson's hawk foraging habitat was considered significant and unavoidable. An "Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County", was executed in August, 2002, between the Cities of Davis, West Sacramento, Winters, and Woodland; the County of Yolo, and the CDFW (Habitat Conservation Joint Powers Agency). The agreement required 1.0 acre of habitat management lands as mitigation for each 1.0 acre of Swainson's hawk foraging habitat lost.

Esperanza Estates Residential Subdivision

The Esperanza Estates impacted approximately 27 acres of Swainson's hawk foraging habitat. Mitigation for the loss of 27 acres of Swainson's hawk foraging habitat was accomplished with an off-site habitat conservation easement on the southwest portion of Assessor's Parcel Number 25-46-04 near County Roads 24 and 93. Project mitigation included a measure requiring on-site preservation of suitable nest trees on lots 88 and 89. The potential adverse impact was mitigated to a less than significant level.

Present Actions In The Project Area

Lopez Residential Subdivision

The Lopez subdivision impacted approximately 22 acres of Swainson's hawk foraging habitat. The impact was considered significant and unavoidable.

Reasonably Foreseeable Future Actions In The Project Area

Capay Cottages Residential Subdivision

The Mitigated Negative Declaration (2007) identified that the project would result in the loss of approximately 3.2 acres of Swainson's hawk foraging habitat and that compensatory mitigation would be required by the Habitat Conservation Joint Powers Agency to offset the impacts

Residential Subdivision

The East Parker subdivision would impact approximately 16.9 acres of Swainson's hawk foraging habitat. There are no active nests that would be removed by the project. The Mitigated Negative Declaration (2007) identified compensatory mitigation that would require the applicant to pay a mitigation fee to the Habitat Conservation Joint Powers Agency to compensate for the loss of approximately 16.9 acres of Swainson's hawk foraging habitat.

Residential Subdivision

The Orciuoli subdivision would impact approximately 35.2 acres of Swainson's hawk foraging habitat. There are no active nests that would be removed by the project. The nearest known active nests are located approximately four miles northeast and four miles southeast of the project.

Residential Subdivision

The Storey subdivision would impact approximately 17.3 acres of Swainson's hawk foraging habitat. There are no active nests that would be removed by the project. The Esparto School District is encouraged to pay a mitigation fee to the Habitat Conservation Joint Powers Agency to compensate for the loss of approximately 17.3 acres of Swainson's hawk foraging habitat.

Esparto New High School

The high school project would impact approximately 28 acres of Swainson's hawk foraging habitat. There are no active nests that would be removed by the project.

Cache Creek Casino Expansion Project

The Cache Creek Casino Expansion (Now Suspended) would have impacted approximately 10 acres of Swainson's hawk foraging habitat, however, no active nests would be removed by the project. The EIR contains a mitigation measure that would require the applicant to pay a mitigation fee to the Habitat Conservation Joint Powers Agency to compensate for the loss of ten acres of Swainson's hawk foraging habitat.

There are six known nest trees within the RSA, all within Location 3. There are no known nest trees within the RSA of Locations 1 and 2, however, suitable foraging habit exists that could be used by hawks nesting in the area of Location 3. It is unknown if the proposed project would remove any nest trees. There are approximately 15,000 acres of suitable Swainson's hawk habitat within the RSA. This project would result in the loss of 30.82 acres of suitable foraging habitat. This represents a loss of 0.25% of the available foraging habitat within the RSA.

Farmland

The RSA considered for assessing incremental impacts to farmland includes the area within a 1-mile radius of the SR-16 project limits, including the rural towns of Esparto, and Madison.

The Capay Valley has been principally agricultural since the mid-nineteenth century In 2012, Yolo County had 1,011 farms with more than 460,000 acres in production. In 2010, there were 374,534 acres of important farmland and an additional 160,450 acres of grazing land within Yolo County.

The project area is predominantly agricultural. The farmland directly adjacent to the proposed project is primarily irrigated lands, with dry farming and grazing lands more dominant outside of the immediate project area. There is scattered and limited urban development, including the towns of Esparto and Madison and the Cache Creek Casino Complex

Cumulative impacts to farmland in the project area may result from residential, commercial, industrial, and highway development.

Development

The following actions were identified that could contribute to the cumulative impacts to farmland.

Past Actions In The Project Area

- Yocha-De-He Golf Club-18 hole golf course
- Esperanza Estates Residential Subdivision, Esparto (95 units)

Present Actions In The Project Area

- Lopez Residential Subdivision, Esparto (72 units)

- Proposed Caltrans SR-16 Safety Improvement Project

Reasonably Foreseeable Future Actions In The Project Area

- Capay Cottages Residential Subdivision, Esparto area (20 units)
- East Parker Residential Subdivision, Esparto (80 units)
- Orciuoli Residential Subdivision, Esparto area (180 units)
- Storey Residential Subdivision, Esparto area (60 units)
- Deterding Town Center Project, 70-acre mixed-use development site (Adjacent to SR-16 north of Woodland Avenue)
- Esparto New High School
- Kaufman Homes Subdivision (1,335 units) I-505 and SR-16 area
- Esparto Main Street Revitalization (Completed by 2020)

The proposed Cache Creek Casino Expansion project was initially considered but it was not considered here because the project was withdrawn from consideration for approval from the county.

Other projects in the area could directly contribute to the permanent conversion of farmland. There are several residential projects currently proposed for the Esparto area. If all of these projects are approved and completed they could contribute up to 462 additional residential units to the town. Tentative revisions to land use plans for Madison have called for up to 1000 additional residential units in the area. There are however, considerable limitations to additional growth in Madison, most notably, inadequate infrastructure. This coupled with numerous other development restrictions make urban development in Madison highly unforeseeable.

The Cache Creek Casino had announced plans to expand the existing facility (now suspended). However, in the Tribal Environmental Impact Report (TEIR) for the expansion, they conclude that the expansion would have no direct or indirect impact to off-reservation agricultural lands.

In the Capay Valley, the greatest threat to the continued use of farmland lies in the land's development potential. However, currently, development pressure is highly tempered by land use policies, zoning restrictions and community attitudes.

There are no measures available to physically replace agricultural lands, particularly prime farmland, as a result of conversion to other uses.

The County's Zoning Code requires private interests to offset the conversion of agricultural land by providing for conservation easements at a 1:1 ratio. As a state agency, Caltrans is not subject to this requirement. It is anticipated that future residential, commercial, and industrial development within Yolo County will be subject to the County's mitigation requirements.

The project will directly result in the permanent removal of approximately 30 acres of farmland from 16 parcels. This is 0.008 percent of the total farmland available in Yolo County. The farmland acquisitions required range in size from 0.1 to 3.6 acres per parcel. It is not anticipated that any landowners who wish to continue farming operations will be precluded from doing so by acquisitions related to the proposed project. Additionally, existing Williamson Act contracts will be modified only for the portion of the parcel being acquired, leaving the remaining acreage still protected under existing contracts.

CEQA Considerations

Avoidance and Minimization Measures

- Impacts to biological resources would be avoided where possible, and otherwise limited to the minimum amount necessary to construct the project.
- Impacts to farmland would be avoided where possible, and otherwise limited to the minimum amount necessary to construct the project. As a result of coordination with the Natural Resources Conservation Service, the farmland impacts are not considered cumulatively considerable.

Mitigation Measures

- The proposed project would include mitigation required to fully offset impacts to VELB; therefore, the project would not contribute to cumulative impacts to this resource.
- The proposed project would include mitigation required to fully offset impacts to GGS; therefore, the project would not contribute to cumulative impacts to this resource.
- The proposed project would include mitigation required to fully offset impacts to Swainson's hawk; therefore, the project would not contribute to cumulative impacts to this resource.

- The proposed project would include mitigation required to fully offset impacts to Valley oak riparian; therefore, the project would not contribute to cumulative impacts to this resource.

- The proposed project would include mitigation required to fully offset impacts to Wetlands and other waters; therefore, the project would not contribute to cumulative impacts to this resource.

Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: “Greenhouse Gas Mitigation” and “Adaptation.” "Greenhouse Gas Mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. “Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)[4].

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle

[4] http://climatechange.transportation.org/ghg_mitigation/

technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively. [5]

Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and proactive approach to dealing with GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order (EO) S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to 1) year 2000 levels by 2010, 2) year 1990 levels by 2020, and 3) 80 percent below the year 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

Assembly Bill 32 (AB 32), Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Cal/EPA and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions: This bill required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board (CARB) to set regional

[5] http://www.fhwa.dot.gov/environment/climate_change/mitigation/

emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Federal

Although climate change and GHG reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the U.S. EPA nor the FHWA has issued explicit guidance or methods to conduct project-level GHG analysis.[6] FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; these strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

[6] To date, no national standards have been established regarding mobile source GHGs, nor has U.S. EPA established any ambient standards, criteria or thresholds for GHGs resulting from mobile sources.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions. U.S. EPA in conjunction with NHTSA issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.7

The U.S. EPA and the NHTSA are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

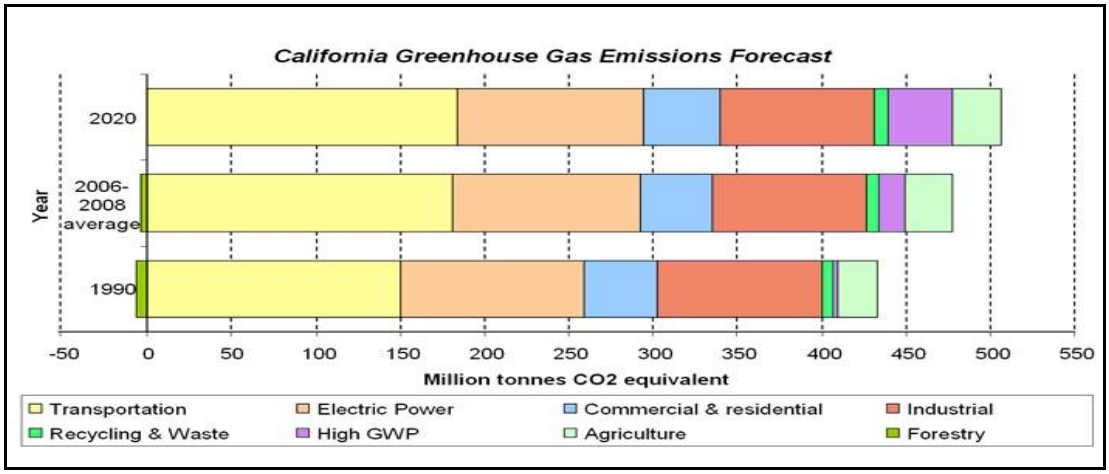
The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish greenhouse gas emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO2 emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles.

[7] http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq

Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.[8] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

The Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, the ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.



California GREENHOUSE GAS FORECAST

Taken from : http://www.arb.ca.gov/cc/inventory/data/forecast.htm

[8] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

Caltrans and its parent agency, the California State Transportation Agency (CalSTA), have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.[9]

The purpose of the proposed project is to improve safety, and although turn lanes would be added, the project would not increase overall roadway capacity and, therefore, is not expected to increase operational CO2 emissions. The traffic-smoothing impacts of the project would also result in decreased idling of vehicles at the intersection. Construction emissions would be unavoidable but there would likely be long-term CHG benefits by improved operation and smoother pavement surfaces, as applicable.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

While the project will result in a slight increase in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. While it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impacts and its' contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

[9] Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

Greenhouse Gas Reduction Strategies

Mobility Pyramid

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies the Department is using to help meet the targets in AB 32 come from then-Governor Arnold Schwarzenegger's Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a corresponding reduction in GHG emissions, while accommodating growth in population and the economy.

The Strategic Growth Plan relies on a complete systems approach to attain CO_2 reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in The Mobility Pyramid.

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities, but does not have local land use planning authority. Caltrans assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It is important to note, however, that control of fuel economy standards is held by the U.S. EPA and ARB.

Caltrans is also working towards enhancing the State's transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under Senate Bill (SB) 375 (Steinberg 2008), SB 391(Liu 2009) requires the State's long-range transportation plan to meet California's climate change goals under Assembly Bill (AB) 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas (GHG) emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future, statewide, integrated, multimodal transportation system.

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State's transportation needs.

The following table summarizes Caltrans and statewide efforts that Caltrans is implementing to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Climate Change/CO_2 Reduction Strategies						
Strategy	**Program**	**Partnership**		**Method/Process**	Estimated CO_2 Savings Million Metric Tons (MMT)	
		Lead	**Agency**		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Transportation System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.045 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, ARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

Climate Change (June 22, 2012): is intended to establish a Caltrans policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013)[10] provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

[10] http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/projects_and_studies.shtml

The following measures would also be included in the proposed project to reduce the GHG emissions and potential climate change impacts from the project:

1. Traffic handling charts and specifications would be incorporated into the proposed project during the design phase that would be included as part of the contractor's specification package in order to manage temporary construction delays.

2. Restrictions on when lanes may be closed.

3. Public notices and press releases provided in local newspapers before major stage or traffic shifts.

4. A Construction Zone Enhanced Enforcement Program (COZEEP) with the CHP during major construction that affects traffic, such as stage changes and traffic shifts.

5. Changeable message signs to alert motorists to unusual or new conditions and any delays that develop

6. Tree removal that has taken place along or near residential development would be replanted in kind with the type of trees and vegetation that has been removed.

7. Large trees that need to be removed due to the construction activities should be replaced by similar ornamental variety or native trees, where they do not interfere with roadway functions or utilities.

Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released

its interagency task force progress report on October 28, 2011[11], outlining the federal government's progress in expanding and strengthening the Nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts.

The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

In addition to addressing projected sea level rise, the California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop The California Climate Adaptation Strategy (Dec 2009)[12], which summarizes the best-known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

[11] http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation

[12] http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report[13] to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

In 2010, interim guidance was released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academies Study.

All state agencies that are planning to construct projects in areas vulnerable to future sea level rise are directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data.

All projects that have filed a Notice of Preparation as of the date of EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

[13] *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at http://www.nap.edu/catalog.php?record_id=13389.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, thas not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be needed to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

CHAPTER 3 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation, the level of analysis required, and to identify potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including: Project Development Team (PDT) meetings, interagency coordination meetings, and public information meetings. This chapter summarizes the results of Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

Federal Endangered Species Act (FESA) Consultation Summary

To initiate FESA consultation, an amended Biological Assessment (BA) for the proposed project is anticipated to be submitted to the USFWS in the winter of 2015.

California Endangered Species Act (CESA) Consultation Summary

Consultation and coordination with the CDFW as required under CESA has been ongoing and will continue through the permit application and approval process, which is expected to occur in 2015.

Federal Wetlands and Other Waters Coordination Summary

The wetland area that is present within the study limits was delineated according to the methodology set forth in the USACE's 1987 Wetlands Delineation Manual. A positive determination for wetlands was made in 2014 based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Work in these drainages and wetlands will require a Section 404 permit from the USACE, a 401 certification from the Central Valley Regional Water Quality Control Board (CVRWQCB), and a 1602 Streambed Alteration Agreement from the CDFW. It is anticipated that permit applications will be submitted in May of 2015.

California Fish and Game Code Section 1602 requires notification before beginning any activities that obstruct or divert the natural flow of a river, stream, or lake; change or use any material from the bed, channel, or bank of a river, stream, or lake; or deposit or disposal of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Consultation and coordination with the USACE and the CDFW has been ongoing and will continue through the permit application and approval process, which is expected to occur in 2015.

Cultural Resources Consultation Summary

Representatives of local Native American groups were contacted regarding any issues of concern related to the proposed project. These contacts, based on an updated list of Native American contacts provided by the Native American Heritage Commission, consisted of letters dated May 31, 2012.

Although no specific concerns were expressed about the project, three meetings have been held with the Yocha Dehe Wintun Nation. Consultation efforts will continue throughout the life of the project.

Natural Resources Conservation Service (NRCS)

Caltrans submitted a completed the Farmland Conversion Impact Rating Form AD-1006 to the NRCS in June 2014. (See Appendix F)

California Department of Conservation – Division of Land Resource Protection

Caltrans provided the first notice of intent to aquire land that is restricted by Williamson Act Contract in June 2014. (See Appendix G & H)

Public Open House

June 26, 2014

On June 26, 2014, Caltrans conducted an open house at the Esparto Community Hall. Approximately 20 people attended. The primary goal of the open house was to inform the public of progress made on the current scope of the proposed project and to gather additional community input.

Several of the comments had to do with the proposed roundabout. Some attendees expressed concern about whether or not agricultural equipment would be able to safely use the roundabout. In addition, many attendees expressed concern about how much right-of-way Caltrans is proposing to acquire from their respective parcels. A few residents also expressed concerns with respect to flooding and drainage issues especially between Esparto and Madison.

July 24, 2014

On July 24, 2014, Caltrans conducted a second open house at the Esparto Community Hall. Approximately 25 people attended. The primary goal of the open house was to inform the public of progress made on the scaled down version of the proposed project and to gather additional community input.

A total of nine comments were received at the workshop. The majority of these written and oral comments had to do with the proposed roundabout and/or signalization of the intersection of SR-16 and CR-89. In addition, many attendees expressed concern about how much R/W Caltrans is proposing to acquire from their respective parcels.

February 25, 2015

On February 25, 2015, Caltrans conducted an open house at the Esparto Community Hall. Approximately 40 people attended. The primary goal of the open house was to make the public aware that the draft environmental document was out for public circulation and that Caltrans was there to answer any questions on the proposed project. In addition Caltrans was there to gather additional community input.

A total of six comments were received at the workshop. The majority of these written and oral comments had to do with the proposed roundabout and/or signalization of the intersection of SR-16 and CR-89. In addition, many attendees expressed concern about how much R/W Caltrans is proposing to acquire from their respective parcels.

Meeting with Madison Migrant Center

On September 19, 2014, an outreach meeting between Caltrans, the operators and residents of the Madison Migrant Center, and officials from Yolo County, was held at the Madison Migrant Center. The primary goal of the outreach meeting was to inform the residents and operators of the migrant center about the project and to gather their input on the proposed project. Many of the residents expressed concern about being able to safely ingress and egress onto SR-16 from the Migrant Center. Some residents expressed interest about Caltrans providing an additional ingress and egress location into the Center from a side road.

This Initial Study with Proposed Mitigated Negative Declaration was made available for public and agency review and comment from February 6, 2015 to March 9, 2015. Caltrans has ensured that the document was made available to all appropriate parties and agencies, including the following: 1) responsible agencies, 2) trustee agencies that have resources affected by the project, 3) other state, federal and local agencies which have regulatory jurisdiction, or that exercise authority over resources that may be affected by the project, 4) the general public. Copies of the document were made available at the Caltrans District 3 Office of Environmental Management (M-1) located at 703 B St., Marysville, CA 95901 and at the Yolo County Library - Esparto, 17065 Yolo Avenue, Esparto, CA 95627 and via the Internet at www.dot.ca.gov/dist3/departments/envinternet/yolo.htm

Comments and responses begin on page 113.

Comment 1 – Capay Hills Orchards

From: Brian & Gretchen Paddock
To: Carroll, Chris S@DOT
Cc: Benipal, Amarjeet S@DOT; Suthahar, Sutha@DOT
Subject: RE: Hwy 16 Project questions and comments.
Date: Tuesday, February 24, 2015 9:21:40 AM

Chris:
Please share this idea with the Project Development Team:
I would support a traditional signal at Hwy 16 and 89. This would also serve to meter traffic in and out of the Migrant Center, providing an opportunity for drivers to turn in our out of the center during the few month it has high occupancy rates.
Brian

From: Carroll, Chris S@DOT [mailto:chris.carroll@dot.ca.gov]
Sent: Tuesday, February 24, 2015 7:57 AM
To: Brian & Gretchen Paddock
Cc: Benipal, Amarjeet S@DOT; Suthahar, Sutha@DOT; Chamberlain, Duane@Yolo
Subject: RE: Hwy 16 Project questions and comments.

Good Morning Brian, Thanks again for your comments on this project. Here are some responses to your additional questions. I have them highlighted below in red.

We encourage you to attend our public information open house tomorrow, Wednesday, February 25 from 5pm to 7pm. I am attaching the flyer.

Feel free to contact the project manager, Sutha Suthahar, at (530) 741-5408 or myself at (530) 741-4276.

Thanks for your interest in this project.

Chris Carroll
Associate Environmental Coordinator
California Department of Transportation - District 3 North Region Environmental Planning
703 B Street
Marysville, CA 95901
(530) 741- 4276
(530) 741-4457 Fax

Panic..... Chaos.....Disorder.....My Job Here Is Done!

From: Brian & Gretchen Paddock [redacted]
Sent: Tuesday, February 17, 2015 1:50 PM
To: Carroll, Chris S@DOT
Cc: Benipal, Amarjeet S@DOT; Suthahar, Sutha@DOT; Chamberlain, Duane@Yolo
Subject: RE: Hwy 16 Project questions and comments.

Chris:

Thanks for the response, but I need a little more information. I'll try to be more specific with these questions:

- A Mailer I got at my house said there would additional access from RD 89 to the migrant center. The environmental document says "Provide additional access to the Madison Migrant Center off of CR-89 (Optional)" Is that incorrect? I thought that was private property on the corner. The map in the environmental document shows two driveway type looking fingers off RD 89 across the private property and into the migrant center. How serious is this as an option?
  The additional access is an optional one, and the proposal is only for one access and not two (one of the two). If we can acquire the required right of way then we will build this additional access. If we can build it, we will restrict the migrant center/daycare center access to/from SR16 to right-turn-in/right-turn-out only. This will reduce the number of cars turning across SR 16 at this location by half, thereby reducing the conflicting movements and accidents at this location.

- How will removing some of the vehicles turning left off of SR16 to the Migrant center be accomplished? The negative declaration say :
  "In addition, at the intersection of SR-16 and CR-89 between Madison and I-505, the project would either:
  • Widen and add a traffic signal, or • Add a roundabout, or • Widen and maintain the existing all-way stop"
  Which one is it?
  Regarding the type of intersection control at Co Rd 89/SR16, the selection will made by the Project Development Team (which will include a representative from Yolo County Public Works). This will take place after the public circulation period for the Draft Environmental Document which ends on 3/10/15. The key comparative information that will influence this decision are:
    - accident rates (when a new intersection control is introduced)
    - delays at the intersection
    - construction costs
    - public opinion.

  We will share this information at the public meeting on 2/25/15.

- If the FHWA Roadside Safety Assessment Report dated April 2012 was an important tool in establishing safety improvement needs, why is there no mention of it in the Initial Study with Proposed Mitigated Negative Declaration?
  The FHWA Roadside Safety Assessment Report dated April 2012 was mentioned periodically throughout the traffic discussion in Chapter 2. This report, along with other reports and studies, are all used to prepare this environmental document.

My overall feedback, which I would like to be part of the public comment records.
We need to be very careful pumping too much money into Hwy 16 changes at the Migrant Center since it is often vacant. Let be as efficient as we possibly can to achieve a "reasonable" level of safety improvement. Purchasing private property would not be reasonable in my mind. Our government agencies should work to be as financially prudent and efficient as possible.

I would support a traditional signal at Hwy 16 and 89. This would also serve to meter traffic in and out of the Migrant Center, providing an opportunity for drivers to turn in our out.

I support widening the shoulder between Madison and Esparto.

Brian Paddock
[redacted]

From: Carroll, Chris S@DOT [mailto:chris.carroll@dot.ca.gov]
Sent: Tuesday, February 17, 2015 10:30 AM
To: Brian & Gretchen Paddock
Subject: RE: Hwy 16 Project questions and comments.

Good Morning Brian, I apologize for the length of time it took to get some responses to your questions. Please see below for our responses.

- Improvements at the north end of Eparto are not part of this project, but may be addressed in a future project.
- The improvements between Esparto and Madison are listed in the Draft Environmental Document located here: http://www.dot.ca.gov/dist3/Projects/0C470/prjindex.htm
- Removing some of the vehicles turning left off of SR16 to the Migrant center improves the safety of the highway and is consistent with the recommendations of the FHWA Roadside Safety Assessment Report dated April 2012 and Caltrans D03 Safety Engineer.
- The signal at Co Rd 89 is still an option under consideration.

If you have any further questions or concerns please contact myself or Caltrans Project Manager, Sutha Suthahar, at (530) 741-5408.

Thank You

Chris Carroll
Associate Environmental Coordinator
California Department of Transportation - District 3 North Region Environmental Planning
703 B Street
Marysville, CA 95901
(530) 741- 4276
(530) 741-4457 Fax

Panic..... Chaos.....Disorder.....My Job Here Is Done!

From: Brian & Gretchen Paddock [redacted]
Sent: Sunday, February 08, 2015 11:34 AM
To: Carroll, Chris S@DOT

Subject: Hwy 16 Project questions and comments.

Chris:
What are the improvements on Hwy 16, at the town of Esparto, where it curves north?
What are the improvements on Hwy 16 between Esparto and Madison?
I've lived in Esparto for 15 years. Why do we need " additional access" to the Madison Migrant center from Rd 89. That facility is normally vacant except during heavy ag harvest months. Who or what organization is pushing that "improvement"?
Any thought towards a signal light instead of flashing red at Madison? I can see where that would be a nice improvement and even save gas from the thousands of cars who needlessly stop, then accelerate.

Thank you,
Brian Paddock

Capay Hills Orchard
Organic Almond Products
Esparto, CA
530 507-8222
C 530 908-9448 (text)
www.chorganicalmonds.com

Comment 2 – Lisa Leonard

From: Carroll, Chris S@DOT
To:
Subject: RE: Comments on Hwy 16 - Brooks to I-505 Project
Date: Monday, February 23, 2015 3:07:00 PM
Attachments: Pubic DED Mailer 2-15 .pdf

Good Afternoon Lisa, Thank you for your comments, we appreciate your interest in this project.

I forwarded your questions on to our project designer whom provided these responses to your questions below. I am hopeful this helps you out.

Location 2

Horizontal Curve:

Straightening the horizontal alignment doesn't really impact the construction cost. The reason for that is the maximum alignment shift for the horizontal curve correction is 8 ft at the center of the curve, which coincides with the new shoulder width, so all of the existing pavement will be used reducing the construction cost.

Vertical Curve:

The Caltrans Highway Design Manual states "For algebraic grade differences of 2 percent and greater, and design speeds equal to or greater than 40 miles per hour, the minimum length of vertical curve in feet should be equal to 10V, where V = design speed." The design speed is 60 mph and the existing grade difference at the vertical curve is 2.64%, so the minimum vertical curve length to meet minimum design standard is 600'.
The existing vertical curve length is approximately 100 ft. To address the accident concentration at this location, meeting the minimum design standards seems like a prudent proposal.

In case you are interested we are having a public open house this Wednesday, February 25 between 5pm and 7pm at the Esparto Community Hall. It will be a "drop in" format which means you can come by anytime and meet out staff and ask questions about the proposed project. I am attaching a flyer.

If you have any additional questions feel free to contact the project manager, Sutha Suthahar at (530) 741-5408 or myself at (530) 741-4276.

Thanks again for your interest in this project!

Chris Carroll
Associate Environmental Coordinator
California Department of Transportation - District 3 North Region Environmental Planning
703 B Street
Marysville, CA 95901
(530) 741- 4276
(530) 741-4457 Fax

Panic..... Chaos.....Disorder.....My Job Here Is Done!

From: [redacted]
Sent: Saturday, February 21, 2015 9:56 AM
To: Carroll, Chris S@DOT
Subject: Comments on Hwy 16 - Brooks to I-505 Project

Hello Chris – I am writing to provide my comments to the newly redesigned proposed project on Hwy 16 between Brooks and I-505. I appreciate the effort CalTrans has put forth in listening to the community and responding to our concerns. The project team has also spent a lot of time explaining the standards and policies that guide CalTrans design decisions for such projects. There has been a greater level of communication and collaboration as this design was established and for that I am grateful to your team.

I still feel that the proposed design is entirely overkill for project location 1 and 2. (I will leave comments on project location 3 to more local residents as they have better direct knowledge than I do on that section). I believe CalTrans can make less invasive and less expensive improvements that would have the desired increase in safety – the types of improvements that have already been made to other sections of the highway with positive effects. For example – signs warning of equipment entering and exiting the road (perhaps even with a blinking light), signs warning of a curve, and rumble strips.

Like us residents, your team acknowledges that there is no ready explanation for the accidents at project location 2. The road is fairly straight and visibility is good on both sides. The proposal to straighten and reduce the vertical rise is just a "guess" that it might help. That is an expensive "guess" with our tax dollars. Wouldn't it be better to try a few "Curve" and "Wildlife Crossing" signs and rumble strips? Fix the small depression in the right lane? As someone who drives the highway nearly every day I believe those improvements would be even more effective than a complete re-alignment of the road.

Sincerely,

Lisa Leonard

Comment 3 – Richard Higson

From: Carroll, Chris S@DOT
To: "Richard Higson"
Subject: RE: State Route 16 Safety Improvement
Date: Wednesday, February 25, 2015 10:52:00 AM

Good Morning Mr. Higson, Thank You for sending me your comments on this project. I will definitely include them into our discussions and decision on this project.

I appreciate it!

Chris Carroll
Associate Environmental Coordinator
California Department of Transportation - District 3 North Region Environmental Planning
703 B Street
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(530) 741- 4276
(530) 741-4457 Fax

Panic..... Chaos.....Disorder.....My Job Here Is Done!

From: Richard Higson [redacted]
Sent: Tuesday, February 24, 2015 12:09 PM
To: Carroll, Chris S@DOT
Subject: State Route 16 Safety Improvement

Hello,
Regarding the improvement at the intersection of Hwy 16 and Co. Rd. 89, I am writing to recommend a roundabout, instead of the other options.
The minor accidents that occur because of the learning curve of roundabouts immensely outweigh the traffic dangers created by driver frustration and aggression caused by traditional painfully tedious four-way stops/traffic lights.
Thank you,
Richard Higson

Comment 4A - John Bissell

June 15, 2009

Yolo 16 Project
c/o Jennifer Clark
Caltrans Environmental Planning
2800 Gateway Oaks Blvd.
Sacramento, CA 95833

Sent via e-mail: jsmiley@dot.ca.gov

RE: Yolo 16 Project EIR and Project Comments

Ms. Clark and the EIR Team

I am a long time cyclist and a land use – transportation planner. I reside in Washington State, but visit annually to ride the Davis Double Century. My first comment is that the road improvement in the planned location is vitally needed. Over the past 10-15 years the traffic has increased substantially along the subject route creating hazardous conditions. On one windy ride in 2007 there were continuous cars driving past with no break for 25 miles as I rode my bike eastbound around 5:00 pm. During this ride, the traffic was so intense I was unable to reach for my water bottle, jeopardizing my ride and my safety. Thus I strongly recommend against the "No Project" alternative.

Second, the improvement plan as I understand it proposes to use rumble strips. I strongly urge against this use. Studies completed by two states and recognized by the Federal Highway Administration (FHA), found that while rumble strips afford an added safety measure for automobiles in preventing run-off-the-road crashes, rumble strips create safety hazards for bicycle riders which can lead to a loss of control and thus running into traffic. Therefore new studies recommend against the use of rumble strips in areas with significant bicycle use – and particularly where annual cycling event(s) are known to occure. The important point here is that the design must accommodate all roadway users, and a safety trade off that increases safety for one user group, but decreases safety for another is not creating a net safety improvement, and thus should not be used.

If other factors lead to the decision to install rumble strips in this section of highway, please follow the recommendations from the FHA:

1. Raised rumble strips should not be permitted under any circumstances
2. The rumble strips should be milled
3. Shallow depth for rumble strip grooves, less than 3/8 inches.

JBA2 -8630 217th St SW, EDMONDS, WASHINGTON 98026
Phone: (206) 498-3610 john@johnbissell.com

4. A 12-foot smooth gap every 40 to 60 feet, so cyclists can maneuver between the lane and the shoulder without riding directly on the bumpy part.
5. A minimum clear shoulder of four (4) feet between the rumble strip and the edge of pavement should be provided, and a minimum of five (5) feet adjacent to gard rails.
6. Small stones, sand and other debris often collect on roadway shoulders. Usually the air turbulence caused by passing traffic will keep the portion of the shoulder closest to traffic relatively clear of such debris. For this reason, most bicyclists prefer to ride on that portion of the shoulder nearest to traffic to avoid debris. To provide a clear area beyond the rumble strip for bicycle travel, highway maintenance agencies should periodically sweep shoulders along identified bicycle routes and other routes of high bicycle usage. If that will not be possible due to budget issues, other mitigation should be made, such as providing a wider shoulder, allowing 2 feet clear area of smooth pavement between the fog line and the rumble strip, and the requisite 4 – 5 feet clear between the rumble strip and the edge of pavement as noted in point 5 above.

I hope these comments help CalTrans to create a safer multimodal rode for all of us to enjoy.

Sincerely

John Bissell, AICP
Principal
JBA Consultants

From: Carroll, Chris S@DOT
To: "John Bissell"
Bcc: Suthahar, Sutha@DOT; Henyford, Steve P@DOT
Subject: RE: Yolo 16 Saftey Project
Date: Friday, February 27, 2015 11:09:00 AM

Hi John, Glad we were able to help you out. See below in red for a few more responses in red.

Thanks again for your interest in the project!

Chris Carroll
Associate Environmental Coordinator
California Department of Transportation - District 3 North Region Environmental Planning
703 B Street
Marysville, CA 95901
(530) 741- 4276
(530) 741-4457 Fax

Panic..... Chaos.....Disorder.....My Job Here Is Done!

From: [redacted] **On Behalf Of** John Bissell
Sent: Friday, February 27, 2015 9:44 AM
To: Carroll, Chris S@DOT
Subject: Re: Yolo 16 Saftey Project

Chris,

Thanks very much for your response. The design team answers are really helpful.

Since you are working on an IS/MMD now it is really important that our concerns are in the plan. With the IS/MMD the resolutions to the concerns need to be placed in the final issued document since that is the only way to be sure that the mitigation are binding. Because these resolutions deal with "project design" and not "environmental" they are included in our project plans, layouts, specs etc. and not in our environmental document. They are not considered "mitigation". The appropriate place for them to be addressed to ensure that they are included as part of the project will be in the project plans, layouts, and specs. These plans, specs, etc. are all being developed and will continue to be developed from now until the project goes to construction.

All of the answers except the answer to item number 4 are great news.

On my item 4: "12-foot smooth gap every 40 to 60 feet, so cyclists can maneuver between the lane and the shoulder without riding directly on the rumble strips" At this point in the project development process Caltrans will give full consideration to the placement of gaps in the rumble strips for bicycle maneuverability.

The answer is pretty vague noting that this issue will be addressed at the time of final construction design. I understand that the design team needs some flexibility, and that this design criteria may not be in the CalTrans design standards. However, this design spec is in the USDOT standards and is very important to bicycle rider safety. If (when) the should is

blocked with debris, or a stalled car or some other impediment, the bicycle rider will need to exit the shoulder. Rumble strips have been found to cause a hazard to bicycle riders, and thus a continuous rumble strip provides no exit opportunity for the bicycle rider.

Assurance of compliance with all criteria that provides safety for bicyclists is critical for the cycling community. Could you please explain the process to ensure that all of the criteria added tot eh finla IS/MMD, including the criteria I requested in my item 4 of my previous email? Caltrans agree's that the safety of bicyclists is important for the cycling community overall. Part of this project includes providing wider shoulders, which are available for cyclists, in addition to the milled rumble strips, etc. All of the criteria outlined will be addressed and included in the project design sheets, layouts, specs, etc., all of which are all being developed and will continue to be developed from now until the project goes to construction.

Adding these criteria that we all agree on to the mitigating conditions seems like a simple way to assure the bicycle community tha the project will be constructed and designed in a way that resolves the issues for both car driver safety and bicycle rider safety.

If CalTrans decides not to include the criteria in the ISMMD, Is there an appeal process for the IS/MMD? Could you explain the process and provide the dates when the IS/MDD is completed and the dates for appeal? Also can you please add me to the IS/MMD notification list? Caltrans is planning to include several bicycle friendly items as part of the proposed project. There is no "appeal" process for the finalization and approval the IS/MND. This project now is in the open public comment period so any and all comments are being considered and addressed and will be entered as part of the project record. Once the IS/MND is finalized and approved the project then moves on to the "design" phase which means the project will essentially be designed. This will take several months given the size of this proposed project.

I will definitely add you to our mailing list so that when the final IS/MND is released I will e-mail you a copy. What you can do from here on out is keep in touch with us as the project moves forward into more intensive design and we can let you know if there are updates on these bicycling related items, or any other project related items.

But better yet, is there a way we can add this and all the other answers to the required mitigation measures in the IS/MMD? All of these comments, including your letter, will be added to comments section of the final IS/MND.

Thanks again for your help.

John Bissell

John Bissell, AICP
[redacted]
206 498 3610

On Fri, Feb 27, 2015 at 8:06 AM, Carroll, Chris S@DOT <chris.carroll@dot.ca.gov> wrote:
Good Morning John, Thank you for your comments and attached letter. I passed them on to our design folks whom provided me with some responses, which I have included below in red.

As you may or may not know the current proposed project is scaled way back from what was proposed in 2009, that is why the previous EIS/EIR is no longer up on our website. As a result we are preparing a new environmental document, which is proposed to be an Initial Study/Mitigated Negative Declaration (IS/MND). That document, in draft form, is currently up on our website. The current scope of work includes 3 spot locations. I am attaching a copy of the current draft document. We hope to have the final completed in mid-late April.

If you have any further questions/comments please myself and/or project manager, Sutha Suthahar know.

Thank you for your interest in this project.

Chris Carroll
Associate Environmental Coordinator
California Department of Transportation - District 3 North Region Environmental Planning
703 B Street
Marysville, CA 95901
(530) 741- 4276
(530) 741-4457 Fax

Panic..... Chaos.....Disorder.....My Job Here Is Done!

From: [redacted] **On Behalf Of** John Bissell
Sent: Wednesday, February 25, 2015 4:18 PM
To: Carroll, Chris S@DOT; Suthahar, Sutha@DOT
Subject: Yolo 16 Saftey Project

Chris Carroll
Sutha Suthahar,

In the initial EIS/EIR for the above referenced project there was some discussion and comment regarding Rumble Strips. I submitted a comment specifically referencing studies that found the problems and solutions related to rumble strips and bicycle use. My comments were incorporated into the final EIS/EIR. Unfortunately that EIS/EIR is not on the website for the reference project. I am attaching my EIS/EIR comment letter to this e-mail for your reference.

The attached comment letter referenced the USDOT standards that were adopted after several states did studies that found rumble strips cause a hazard to bicycle riders. Standard rumble strips create a hazard that cause bicycle riders to lose control of their bikes and can cause the rider to fall into traffic causing injury and/or death. This problem outweighs the benefits of rumble strips in areas where bicycle rider traffic is somewhat heavy, as it is during several months per year on highway 16.

However, the study also recognized the benefit of rumble strips in preventing single

car run-off the road crashes. Thus there was a conflict in appropriate design criteria on roads that had substantial bicycle traffic and a high incident of single car run-off the road crashes.

After further research it was found that the following criteria should be used where there was a conflict as described above:

If other factors lead to the decision to install rumble strips in this section of highway, please follow the recommendations from the FHA:

1. Raised rumble strips should not be permitted under any circumstances Raised rumble strips will not be used. We will use the Standard Plan A40B for rumbles strips.
2. The rumble strips should be milled, not pressed. (Milled creates a round bottom that is an inconvenience to cyclists, not a hazard) The rumble strips will be milled.
3. Shallow depth for rumble strip grooves, less than 3/8 inches. Rumble strip depth will be 5/16''.
4. 12-foot smooth gap every 40 to 60 feet, so cyclists can maneuver between the lane and the shoulder without riding directly on the rumble strips. During final design, consideration will be given to placing gaps in the rumble strips for bicycle maneuverability.
5. A minimum clear shoulder of four (4) feet between the rumble strip and the edge of pavement should be provided, and a minimum of five (5) feet adjacent to gard rails. There will always be at least 6' between the rumble strip and Edge of pavement (6.5' is typical).
6. Small stones, sand and other debris often collect on roadway shoulders. Usually the air turbulence caused by passing traffic will keep the portion of the shoulder closest to traffic relatively clear of such debris. For this reason, most bicyclists prefer to ride on that portion of the shoulder nearest to traffic to avoid debris. To provide a clear area beyond the rumble strip for bicycle travel, highway maintenance agencies should periodically sweep shoulders along identified bicycle routes and other routes of high bicycle usage. If that will not be possible due to budget issues, other mitigation should be made, such as providing a wider shoulder, allowing 2 feet clear area of smooth pavement between the fog line and the rumble strip, and the requisite 4 – 5 feet clear between the rumble strip and the edge of pavement as noted in point 5 above. As mentioned above there will always be at least 6' between the rumble strip and edge of pavement. A major component of this project includes providing wider shoulders.

The original EIS/EIR incorporated theses comments. After the Final EIS/EIR was completed I discussed this issue with the lead design engineer who agreed to use these standards. Many cyclists in the area would feel relief if you could assure the public that either, no rumble strips are proposed, or that if rumble strips are proposed the above design criteria will be used to ensure bicycle rider safety.

I'm hoping you can tell me if any construction plan sets have been started on the referenced project, and if any have been, I hop you can forward PDF of these plans to me for review.
Also, please send a PDF copy of the final EIS/EIR along with the associated draft EIS/EIR

Thank you for your time and consideration.

John Bissell, AICP

Comment 4B - John Bissell

From: [redacted]
To: Carroll, Chris S@DOT; Keaton, Dennis L@DOT
Cc: John Bissell; Suthahar, Sutha@DOT
Subject: Re: Yolo 16 Saftey Project
Date: Monday, March 09, 2015 12:51:26 PM
Attachments: WSDOT Standard Plans.pdf

Chris,

thanks for all your help on this project.

As I said in previous e-mails, if rumble strips are to be used it is very important to me, and several bicycle groups that the design be bicycle friendly. In you response you note how Caltrans would deign to every criteria that is important to bicyclists, except one. On that one is a gap in rumble strip so that bicycle riders have a safe way to exit the shoulder if there is an obstacle. In that case, you did not say no, but instead you said that this would be considered during the design process.

This issue is well studied, particularly by the Washington State Department of Transportation (WSDOT). A study conduced and published subsequent to 1994 found the benefits, but also the hazards associated with rumble strips. One of those hazards is causing bicyclists to lose control and fall into traffic. The mitigating measures I suggested in my previous e-mails that CalTans has agreed to go a significant way toward mitigating the hazard. But the gap as proposed does not reduce the effectiveness of the rumble strips for single car run off the road crashes, while dramatically reducing the hazard rumble strips create for the bicyclist.

To help, I looked up the WSDOT design standards, found in the manual called the "WSDOT Standard Plans, M 21-01 August 4, 2014". That manual contains two sheets labeled M - 60.20.02 are the relevant design specifications. I have attached those two sheets for your convenience.

I hope this helps in creating a roadway design that is safe for all users.

Thank you,

John Bissell

John Bissell, AICP
[redacted]

On Fri, Feb 27, 2015 at 8:06 AM, Carroll, Chris S@DOT <chris.carroll@dot.ca.gov> wrote:

> Good Morning John, Thank you for your comments and attached letter. I passed them on to our design folks whom provided me with some responses, which I have included below in red.
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> As you may or may not know the current proposed project is scaled way back from what was proposed in 2009, that is why the previous EIS/EIR is no longer up on our website. As a result we are preparing a new environmental document, which is proposed to be an Initial Study/Mitigated

Negative Declaration (IS/MND). That document, in draft form, is currently up on our website. The current scope of work includes 3 spot locations. I am attaching a copy of the current draft document. We hope to have the final completed in mid-late April.

If you have any further questions/comments please myself and/or project manager, Sutha Suthahar know.

Thank you for your interest in this project.

Chris Carroll

Associate Environmental Coordinator

California Department of Transportation - District 3 North Region Environmental Planning

703 B Street

Marysville, CA 95901

(530) 741- 4276

(530) 741-4457 Fax

Panic..... Chaos.....Disorder.....My Job Here Is Done!

From: [redacted] **On Behalf Of** John Bissell
Sent: Wednesday, February 25, 2015 4:18 PM
To: Carroll, Chris S@DOT; Suthahar, Sutha@DOT
Subject: Yolo 16 Saftey Project

Chris Carroll

Sutha Suthahar,

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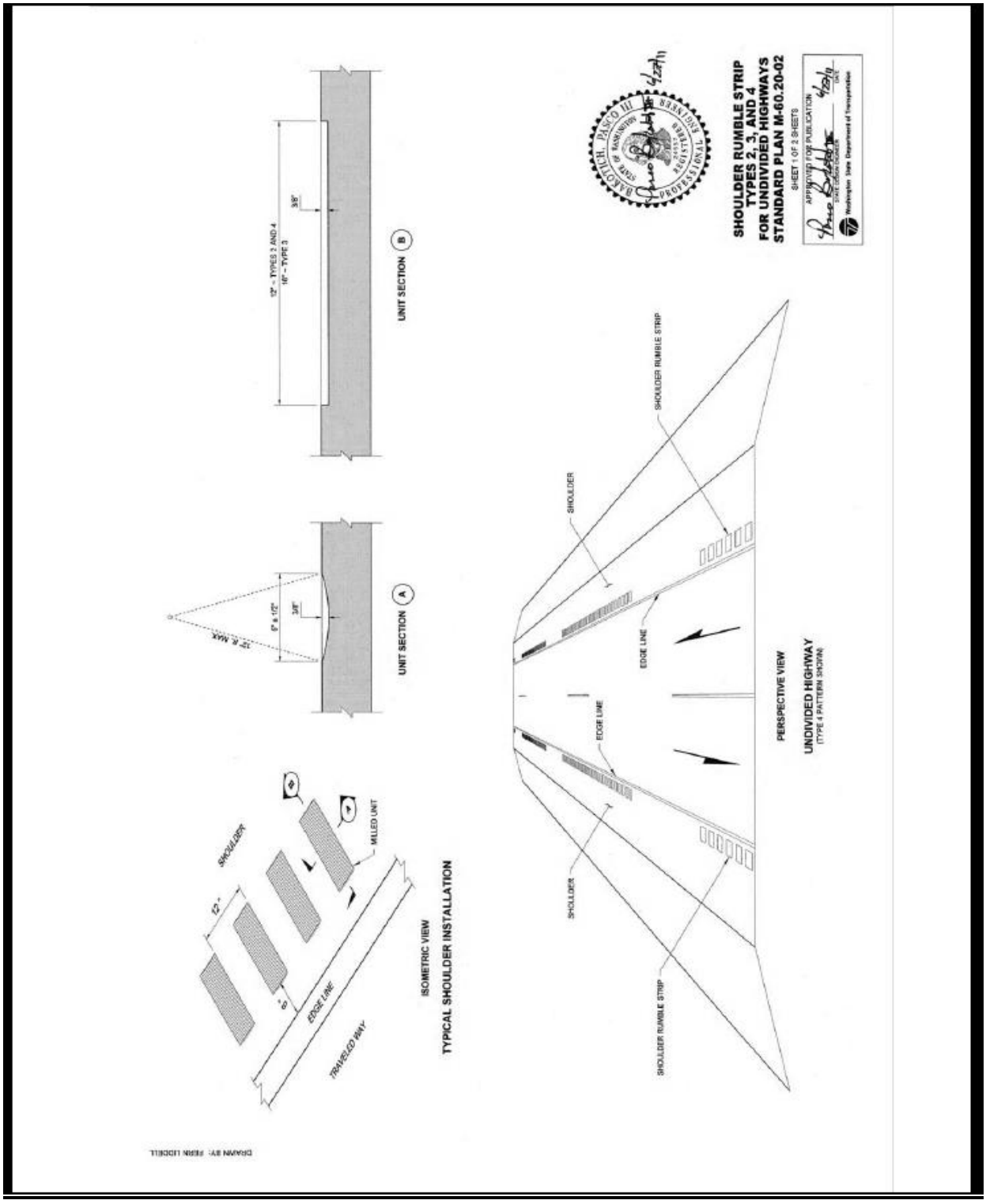
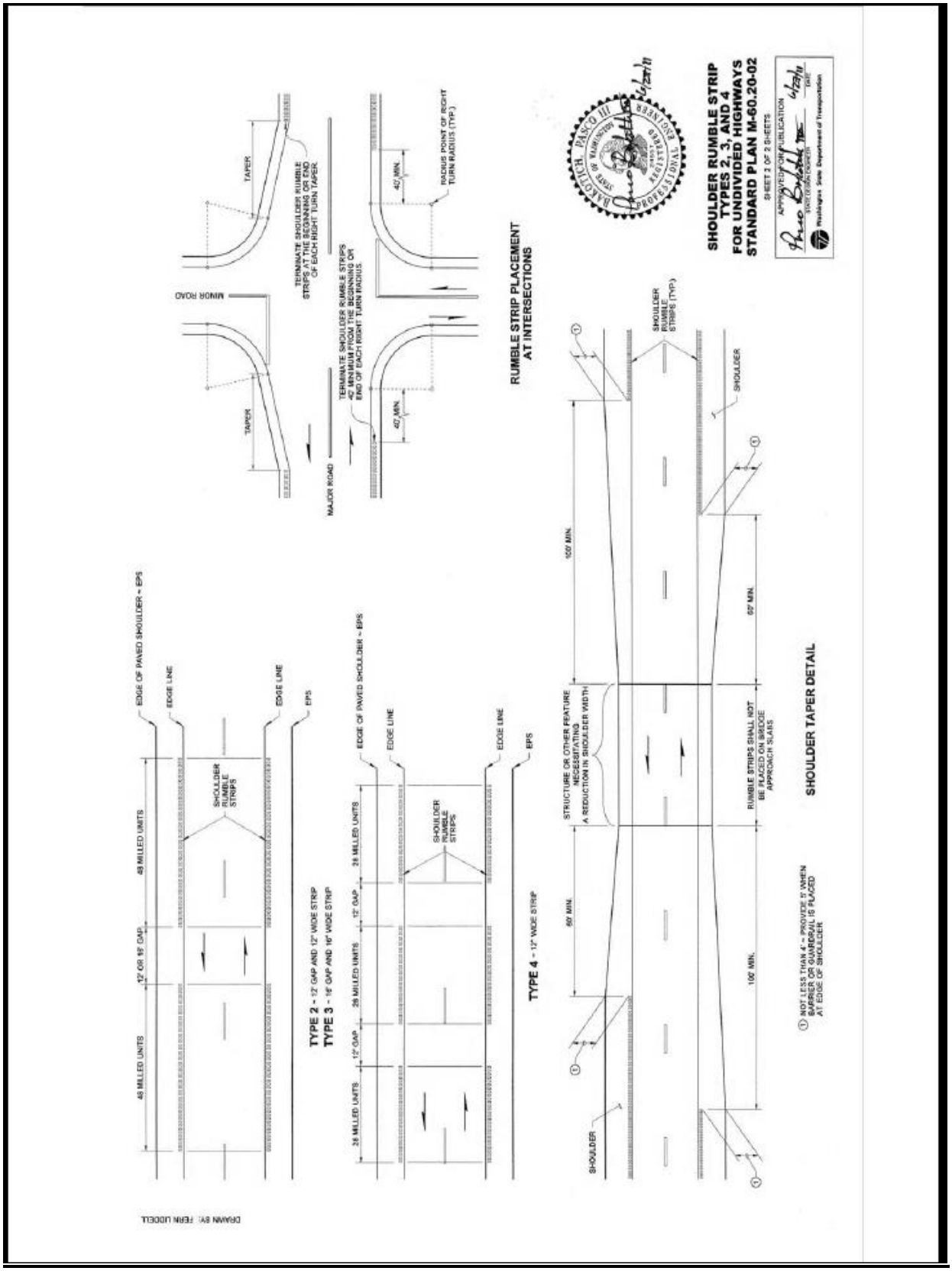
Also, please send a PDF copy of the final EIS/EIR along with the associated draft EIS/EIR

Thank you for your time and consideration.

John Bissell, AICP


SHOULDER RUMBLE STRIP
TYPES 2, 3, AND 4
FOR UNDIVIDED HIGHWAYS
STANDARD PLAN M-60.20-02
SHEET 1 OF 2 SHEETS
APPROVED FOR PUBLICATION
UNIT SECTION (B)
12" - TYPES 2 AND 4
16" - TYPE 3
3/8"
UNIT SECTION (A)
12" R. MAX
6" ± 1/2"
3/8"
ISOMETRIC VIEW
TYPICAL SHOULDER INSTALLATION
SHOULDER
MILLED UNIT
12"
6"
EDGE LINE
TRAVELED WAY
PERSPECTIVE VIEW
UNDIVIDED HIGHWAY
(TYPE 4 PATTERN SHOWN)
SHOULDER
SHOULDER RUMBLE STRIP
EDGE LINE
EDGE LINE
SHOULDER
SHOULDER RUMBLE STRIP


SHOULDER RUMBLE STRIP
TYPES 2, 3, AND 4
FOR UNDIVIDED HIGHWAYS
STANDARD PLAN M-60.20-02
SHEET 2 OF 2 SHEETS
APPROVED FOR PUBLICATION
Washington State Department of Transportation
RUMBLE STRIP PLACEMENT
AT INTERSECTIONS
TERMINATE SHOULDER RUMBLE STRIPS
40' MINIMUM FROM THE BEGINNING OR
END OF EACH RIGHT TURN RADIUS
TERMINATE SHOULDER RUMBLE
STRIPS AT THE BEGINNING OR END
OF EACH RIGHT TURN TAPER
MAJOR ROAD
MINOR ROAD
TAPER
TAPER
40' MIN.
40' MIN.
RADIUS POINT OF RIGHT
TURN RADIUS (TYP.)
TYPE 2 - 12' GAP AND 12" WIDE STRIP
TYPE 3 - 16' GAP AND 16" WIDE STRIP
48 MILLED UNITS
12' OR 16' GAP
48 MILLED UNITS
EDGE OF PAVED SHOULDER = EPS
EDGE LINE
SHOULDER
RUMBLE
STRIPS
EDGE LINE
EPS
36 MILLED UNITS
12' GAP
36 MILLED UNITS
12' GAP
36 MILLED UNITS
EDGE OF PAVED SHOULDER = EPS
EDGE LINE
SHOULDER
RUMBLE
STRIPS
EDGE LINE
EPS
TYPE 4 - 12" WIDE STRIP
SHOULDER TAPER DETAIL
STRUCTURE OR OTHER FEATURE
NECESSITATING
A REDUCTION IN SHOULDER WIDTH
150' MIN.
SHOULDER
RUMBLE
STRIPS (TYP)
SHOULDER
60' MIN.
80' MIN.
100' MIN.
RUMBLE STRIPS SHALL NOT
BE PLACED ON BRIDGE
APPROACH SLABS
SHOULDER
① NOT LESS THAN 4' - PROVIDE 5' WHEN
BARRIER OR GUARDRAIL IS PLACED
AT EDGE OF SHOULDER
DRAWN BY: FERN UDDELL

Comment 5 – Lloyd Wendland

Yolo 16 Safety Improvement Project
OPEN HOUSE
Wednesday, February 25, 2015, 5:00-7:00 p.m., Esparto Community Hall
COMMENT SHEET

Name: Lloyd Wendland

Organization/ Business Affiliation (if applicable): FARMER

Address: 15720 STATE Hwy 16, CAPAY

E-Mail Address:

Preferred alternative at Co Rd 89 (circle one): Roundabout, all-way stop (multilane), or traffic signal

Comments: NO LEFT TURN LANE AT Rd 79
LOCATION #1, OPTION A

Completing and signing this document is voluntary. Caltrans may use this information for statistical purposes, to notify you of any future hearings, or to assist in providing you with further information. This document is public record and may be subject to inspection and copying by other members of the public.

Please deposit this sheet into the comment box before the end of the public meeting. Or if you wish, send your comments by mail to Caltrans, 703 B Street, Marysville, CA 95901 or by e-mail to Sutha Suthahar (sutha.suthahar@dot.ca.gov). **Please submit comments by March 10, 2015.**

Comment 6 – Greg Kringen

Yolo 16 Safety Improvement Project
OPEN HOUSE
Wednesday, February 25, 2015, 5:00-7:00 p.m., Esparto Community Hall
COMMENT SHEET

Name: Greg Kringen

Organization/ Business Affiliation (if applicable): Yolo Ag. Dev. Co.

Address: 4050 Hwy 16 Guinda.

E-Mail Address: gregkringen@yahoo.com

Preferred alternative at Co Rd 89 (circle one): ~~Roundabout, all-way stop (multilane)~~, or traffic signal

Comments:

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Comment 7 – Michael McDonald

Yolo 16 Safety Improvement Project
OPEN HOUSE
Wednesday, February 25, 2015, 5:00-7:00 p.m., Esparto Community Hall
COMMENT SHEET

Name: Michael McDonald

Organization/ Business Affiliation (if applicable): Capay Valley Coalition

Address: 20179 CR 79A Capay CA 95607

E-Mail Address:

Preferred alternative at Co Rd 89 (circle one): Roundabout, all-way stop (multilane), or traffic signal – Leave as is

Comments:

I oppose the turn lane as presented at Road 79A

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Comment 8 – Colleen Fescenmeyer

Yolo 16 Safety Improvement Project
OPEN HOUSE
Wednesday, February 25, 2015, 5:00-7:00 p.m., Esparto Community Hall
COMMENT SHEET

Name: Colleen Fescenmeyer

Organization/ Business Affiliation (if applicable): ECAC / ECSD

Address: 16857 Michael Ct Esparto

E-Mail Address: fescenmeyer@yahoo.com

Preferred alternative at Co Rd 89 (circle one): Roundabout, all-way stop (multilane), or traffic signal

Comments: Please contact me regarding the traffic calming on Hwy 16 in Esparto. We would like updates on the progress re: Solar lighting and solar crosswalks. This is wrong money from Streetscape.

You can also contact me if you want to be on the ECAC or ECSD agenda in the future to discuss the improvement project on streetscape w/ the community

Thank You

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Comment 9 – Colleen Fescenmeyer

Yolo 16 Safety Improvement Project
OPEN HOUSE
Wednesday, February 25, 2015, 5:00-7:00 p.m., Esparto Community Hall
COMMENT SHEET

Name: Colleen Fescenmeyer

Organization/ Business Affiliation (if applicable): ECAC / ECSD

Address: 16857 Michael Ct Esparto

E-Mail Address: fescenmeyer@yahoo.com

Preferred alternative at Co Rd 89 (circle one): Roundabout, all-way stop (multilane), or traffic signal

Comments: Please look into widening the SB 505 on ramp on Hwy 16 east. If there could be a dedicated right turn lane that would be great. There have been couple accidents at that intersection or near-there.

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Comment 10 – Duane Chamberlain

Yolo 16 Safety Improvement Project
OPEN HOUSE
Wednesday, February 25, 2015, 5:00-7:00 p.m., Esparto Community Hall
COMMENT SHEET

Name: Duane Chamberlain

Organization/ Business Affiliation (if applicable): YoloCounty Rd & Sups

Address: 34530 Co Rd 29 Woodland

E-Mail Address: DuChamberlain@yoloCounty.org

Preferred alternative at Co Rd 89 (circle one): Roundabout, all-way stop (multilane), or traffic signal

Comments: No Roundabout!!

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Comment 11 – Janine Gilham

Yolo 16 Safety Improvement Project
OPEN HOUSE
Wednesday, February 25, 2015, 5:00-7:00 p.m., Esparto Community Hall
COMMENT SHEET

Caltrans

Name: Eka Janine Gillham

Organization/ Business Affiliation (if applicable):

Address: 16908 Omega Street, Esparto CA 95627

E-Mail Address: j96illham@gmail.com

Preferred alternative at Co Rd 89 (circle one): Roundabout, all-way stop (multilane), or traffic signal

Comments: If you want to change the allway stop I would like to see a traffic signal in place there. Coming towards the traffic Signal the speed limit is 45 miles per hour so people have plenty of time to stop for the traffic signal.
I do not want the Roundabout. This road is the only way out and into Esparto and we have lots of Farm Equipment, Large Delivery trucks and a lot of Cascio Traffic that does not like to yield to anyone. I feel there would be lots of accidents if you put in the Roundabout.

Completing and signing this document is voluntary. Caltrans may use this information for statistical purposes, to notify you of any future hearings, or to assist in providing you with further information. This document is public record and may be subject to inspection and copying by other members of the public.

Please deposit this sheet into the comment box before the end of the public meeting. Or if you wish, send your comments by mail to Caltrans, 703 B Street, Marysville, CA 95901 or by e-mail to Sutha Suthahar (sutha.suthahar@dot.ca.gov). **Please submit comments by March 10, 2015.**

Comment 12 – John Whitehead

Chris Carroll
Caltrans, Office of Environmental Management
703 B Street
Marysville, CA 95901

2015 March 8

Dear Chris Carroll and the Caltrans District 3 team,

The following is submitted as public comment in response to the Draft Initial Study/Proposed Mitigated Negative Declaration (IS/MND) for the State Route 16 project in Yolo County, recently accessed at http://dot.ca.gov/dist3/Projects/0C470/prjindex.htm. The IS/MND is referred to below as the draft environmental document. The subject of my comments is the need to put more consideration and effort into rumble strip safety.

My qualifications to comment
I drive my car 200 miles per week, mostly at freeway speeds, with decades of experience on two-lane state highways, so I fully appreciate the importance of motor vehicle safety. My 27 years of professional work in aerospace engineering was preceded by earning a PhD in engineering for doing original research in automobile steering dynamics, so I have a solid understanding of motor vehicle maneuvering, e.g. relevant to drowsy drivers running off the road. I ride bicycles approximately 100 miles per week in towns, county roads, and on state highways, so I'm very familiar with bicycle safety. I have ridden bicycles many times on Highway 16 over the full length of Capay Valley. I've carefully read many sections in the California Vehicle Code, so I am more familiar with the Rules of the Road than is possible by only studying to pass the driver's license test. Over the years I have purchased updated versions of the CVC, and I still have my first one dated 1979. Since the 1980's, I have had continuous membership in the Davis Bike Club, the American Automobile Association, and the Society of Automotive Engineers. For some years in my youth, I lived with a car-culture disdain for bicycles, so I know that misunderstandings and biases can exist.

The draft environmental document is incomplete
The draft environmental document for State Route 16 leaves the impression that prioritizing bicycle safety might be a separate procedural activity from actual road work, which would be unacceptable. It is of great concern that there is no mention of bicycles or bicycle safety in any of the paragraphs that refer to rumble strips. The document has encouraging language about the importance of bicycle safety, but with no details and without any mention of rumble strips in the paragraphs that refer to bicycles.

A paragraph on pages 18-19 in the draft environmental document says that "the proposed project is designed to improve safety for all roadway users," which is only possible if bicycles can safely maneuver from the roadway onto the shoulder to escape harm. The same paragraph states that wider shoulders will improve the roadway, which seems inconsistent with the legal definition of "roadway." Wide shoulders will be appreciated by people riding bicycles in many cases, but please note that the shoulder is not part of the roadway, as defined by the California Vehicle Code, section 530. The word

"roadway" is used consistently in accordance with this definition in CVC 21202(a), which explains that bicycles use the roadway, where vehicles travel.

Revisions requested
The draft environmental document should be revised to explicitly include the following information. Planning and implementing roadwork might not otherwise benefit from these explanations in the absence of sufficient bicycle riding experience.

1. People riding bicycles frequently maneuver to avoid pieces of debris and pavement rough spots, either of which are often too small to be noticed by people driving motor vehicles.

2. Shoulder rumble strips are horribly bumpy for bicycles, to the point of danger.

3. People riding bicycles often use the roadway in accordance with the California Vehicle Code, while bicycles are alternatively often ridden on road shoulders.

4. A shoulder is not a bicycle lane and a shoulder is not part of the roadway (CVC 530). Traffic safety includes bicycle safety, per the definition of "traffic" (CVC 620).

5. Bicycle traffic safety requires the capability to safely maneuver from the roadway to the shoulder and back again, on short notice, to avoid hazards. Roadway hazards include other traffic, while shoulder hazards include low quality or decaying pavement, collected debris, and parked vehicles.

6. Repaving work for state highways in California sometimes includes only the roadway, while cracked bumpy shoulders are neglected entirely and left "as is" to decay. A recent example is State Route 128 just west of the City of Winters, where the roadway is newly smooth and the shoulders remain old and of poor quality.

7. Smooth gaps in rumble strips permit bicycles to safely maneuver between the roadway and the shoulder, without compromising the intended purpose of awakening sleepy drivers of drifting vehicles. Vehicle tires on a continuous rumble strip produce a continuous long "buzzzzzzzzzzz," while the sound is a rapidly repeating "buzz-buzz-buzz" when gaps are used. At vehicle speeds, the repetition rate is more than once per second, with only a very brief quiet spot between the separate "buzz" sounds, roughly one-tenth of a second.

8. When a motor vehicle with a sleepy driver gradually drifts off the road, it is not possible for the vehicle to slip through a gap in a rumble strip without making the alarming "buzz-buzz-buzz" noise. In order for a vehicle to slip through a 10-foot or a 12-foot gap, a severe steering maneuver would have to happen at exactly the right moment, more sudden than a typical lane-change. In such a situation, a car would quickly run off the road and it would not matter whether the rumble strip has gaps or not.

9. The US Department of Transportation, Federal Highway Administration, recommended the use of rumble strip gaps almost 14 years ago, in Technical Advisory T 5040.35, dated December 2001. Pages of this document, with underlines to emphasize key points, appear in Appendix L of the December 2009 Final Environmental Impact Report for the State Route 16 Safety Improvement Project (as had been planned in 2009).

10. The State of Arizona, for example, has adopted the use of gaps for all shoulder rumble strips. The standard is a repeating 40-foot pattern having 30 feet of grooves and a 10-foot smooth gap. The Arizona practice is documented by Standard Drawing M-22, Sheet 2 of 3, dated June 2014, of the Arizona Department of Transportation, Intermodal Transportation Division, Traffic Signing and Marking, drawing title "Longitudinal Rumble Strip Exception Details." This drawing sheet was recently accessed via the internet at the following URL, <http://azdot.gov/docs/default-source/businesslibraries/M-22b-June-14.pdf?sfvrsn=18>. In addition, the Arizona DOT website explains the purpose of rumble strips and gaps in a public outreach page, at the following URL, <http://azdot.gov/media/blog/posts/2013/09/04/transportation-defined-rumble-strips>.

11. The State Route 16 project is an ideal opportunity to implement rumble strip gaps in California. Standard Plans page A-40B needs to be updated to include gaps in shoulder rumble strips. The footnote referring to bicycles suggests an inherent notion that bicycles will always ride on the shoulder, never needing to cross rumble strips, which is contrary to law (bicycles use both the roadway and the shoulder).

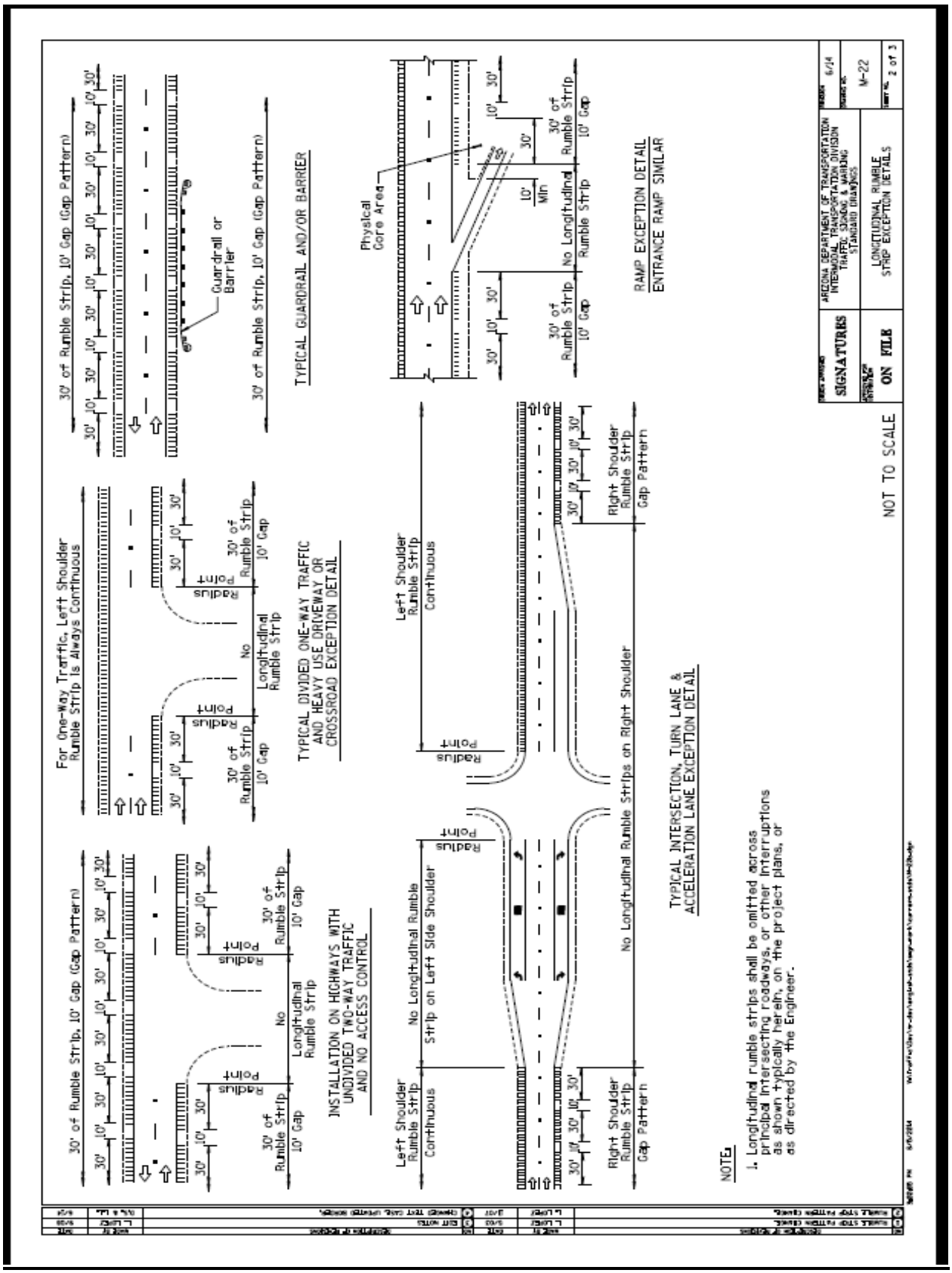
12. Considering the importance of minor pavement defects for bicycle safety, it is obviously inappropriate for any government highway authority to treat rumble strip specifications as "details to be left up to the contractor." Bicycle-safe rumble strip details need to be incorporated into the road construction contract for State Route 16. In addition to including gaps, there needs to be enforcement of the maximum 5/16 inch depth for rumble strip grooves.

13. When the earlier State Route 16 Safety Improvement Project was planned back in 2009, comments in favor of rumble strip gaps were submitted to Caltrans by roughly 20 people. All those comments in that earlier environmental document (Appendix L, as above) are completely relevant to the present project planning, and therefore should be incorporated into the present environmental document and planning process.

Sincerely,

J C Whitehead (submitted electronically)

John Whitehead
3322 Biscayne Bay Pl.
Davis, CA 95616
530-758-8115
jcw@dcn.org


30' of Rumble Strip, 10' Gap (Gap Pattern)
For One-Way Traffic, Left Shoulder Rumble Strip Is Always Continuous
30' of Rumble Strip, 10' Gap (Gap Pattern)
Guardrail or Barrier
30' of Rumble Strip, 10' Gap (Gap Pattern)
TYPICAL GUARDRAIL AND/OR BARRIER
Physical Gore Area
30' of Rumble Strip
10' Gap
Radius Point
No Longitudinal Rumble Strip
TYPICAL DIVIDED ONE-WAY TRAFFIC AND HEAVY USE DRIVEWAY OR CROSSROAD EXCEPTION DETAIL
10' Min
30' of Rumble Strip
No Longitudinal Rumble Strip
10' Gap
RAMP EXCEPTION DETAIL
ENTRANCE RAMP SIMILAR
INSTALLATION ON HIGHWAYS WITH UNDIVIDED TWO-WAY TRAFFIC AND NO ACCESS CONTROL
Left Shoulder Rumble Strip
Continuous
No Longitudinal Rumble Strip on Left Side Shoulder
Left Shoulder Rumble Strip
Continuous
Right Shoulder Rumble Strip
Gap Pattern
No Longitudinal Rumble Strips on Right Shoulder
Right Shoulder Rumble Strip
Gap Pattern
TYPICAL INTERSECTION, TURN LANE & ACCELERATION LANE EXCEPTION DETAIL
NOTE:
1. Longitudinal rumble strips shall be omitted across principal intersecting roadways, or other interruptions as shown typically herein, on the project plans, or as directed by the Engineer.
NOT TO SCALE
SIGNATURES
ON FILE
ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
TRAFFIC SIGNING & MARKING
STANDARD DRAWINGS
M-22
LONGITUDINAL RUMBLE STRIP EXCEPTION DETAILS
6/14
2 of 3

Comment 13 – Triple Creek Farm

From: Douglas Dahlin
To: Carroll, Chris S@DOT
Subject: Hwy 16 Improvements
Date: Saturday, March 07, 2015 4:49:56 PM

Dear Chris Carroll,

I send this message in regards to the proposed improvements on Highway 16. My husband and I are owners of the property located at 15790 County Road 82B with significant frontage along Highway 16. Our property would be impacted by the work you propose near 82B. Unfortunately, we were not able to attend the meeting on Feb. 25th in Esparto.

Our questions are: Why is the work necessary in the area 0.3 miles west of 82B to 200' west of 82B?
How much of our land will be needed to complete this project?
How much do you propose to compensate us for taking our land out of its agricultural use?

Many thanks for your help in this matter,

JoAnne Dahlin
Triple Creek Farm

Comment 14 – Paul Muller

From: Paul Muller
To: Carroll, Chris S@DOT
Cc: Nancy Pennebaker
Subject: Sr 16 project
Date: Monday, March 09, 2015 4:51:56 PM

Dear Chris and Caltrans, I am writing with a couple of comments regarding the proposed SIP for SR 16 near the town of Esparto. I have a few comments with regards to project location 3 with regards to the removal of trees on the south west part of the segment closest to the intersection of Yolo Avenue and the project. Your Engineer, at the meeting held in Esparto heard my concerns that the trees are part of the transition between the faster moving segment and the slower moving business district. It seems clear that a 20 foot recovery zone here would not be needed because the speeds in this area would be much slower and would help to calm traffic in the transition.

I would also express concern about the removal of the Osage Orange trees in the middle of the project. Your project manager rather glibly stated that the landowner wants the trees out of there. It seems to me that these trees are apart of Caltrans jurisdiction and are bordered by the highway to the north and a drainage ditch to the south,making them more wholly the concern of Caltrans. These trees have a historical value, are a completely unique vegetation to the county and again would be at the edge of the clear recovery zone and should be left there. We have gone over the "engineering standards' and 'liability' arguments many times with you all, and feel that it is a bit of a universal excuse that is given out to justify the most "irrefutable ' consideration when there is more latitude than Caltrans is willing to admit. Please evaluate the unique character of the trees and their historical value.

Finally, there was a street 'scape study' done years ago for the community of Esparto in a great community process that recommended that Caltrans and the County of Yolo begin to evaluate the long term economic and safety impact on the central business district of Esparto where all traffic is funneled through the community. It was then requested that Caltrans consider the long term movement of traffic around the town and consider a bypass of the community to the north of town along the old railroad right of way. I would hope that Caltrans keeps this recommendation and request In mind when planning safety improvements to this corridor— and put this improvement into the planning pipeline that may see it realized in 10 or more years.

Finally most community members were pleased when the last 'SIP' for this segment was rejected in court. Much of the concern was regarding the growth inducing impacts and the elevation of the road bed that was uncertain in the EIR... I would think that most residents would have little problem with seeing a modest rise in the roadbed—4 inches to mitigate the problems of flooding. I am surprised that Caltrans didn't deal with the issues and address the judges concerns and offer a solution to the court that would allow the more cost effective solution of a very modest roadbed elevation in/ near the existing alignment. Farmers were concerned that the 4 feet suggested in the last project would be crazy, but they would not have a problem, i think with a slight rise in elevation. Way was this not considered?

In the groups that I have worked with commenting on the SIP in this segment, and for the entire project, worries were expressed about a roadway design actually increasing speeds and making the segment more dangerous for tractors and ag equipment because the closing speeds get greater...I realize from past discussions with Caltrans that you feel that you have little latitude with regards to design and can't calculate design and the propensity of certain designs to moderate speeds. Yet your design is certainly important for the future and energy use— 55 saves lives, gas-fewer emissions, 55 can be influenced by the surroundings left or planted like existing trees and Shrubs to make things slower. Please consider design options to make the road safe but not turn it into a wide open raceway— travel I505 and see that most folks do 75 to 80 mph. they need to know that when they get on SR 16, it is time to move slower- at 55 and safer— expand your horizons and consider how this segment might be designed to influence this behavior.

Thanks of reconsidering these comments.

Paul Muller

Comment 15 – Capay Valley Coalition

Capay Valley Coalition
P.O. Box 894
Esparto, CA 95627

March 10, 2015

Chris Carroll
Caltrans, Office of Environmental Management M-1
703 B Street
Marysville, CA 95901

Re: State Route 16 Initial Study with Mitigated Negative Declaration

Dear Ms. Carroll:

The Capay Valley Coalition provides the following comments on the Initial Study with Proposed Mitigated Negative Declaration for the State Route 16 Safety Improvement Project:

1. Page 5 Caltrans' proposed replanting of 76 Valley oaks should be within the Capay Valley whether within a CT right of way or another property. Additionally, the replanted trees should be located within State Route 16's view shed.

2. page 9 Option B is a preferred choice for location 1 as it has less impacts to Taylor Creek and most right of way for that choice has been obtained. (CVC understands that the owner of the house on the corner is a willing seller.)

3. Location 3 –Esparto
   CVC understands that there will be a traffic light at the intersection of Yolo Avenue and County Road 21A. There will be a two way left turn lane from Yolo Avenue to just east of County Road 86A which will enable left turns into business and residences and provide a refuge area for pull outs.

   At the meeting in Esparto, Caltrans informed CVC's representative that a curb would be built to help protect the Parker house on the north side of the highway at the intersection; but Caltrans now plans to remove trees and make a clear recovery zone on the south side. Caltrans should preserve the trees on the south side and build a curb at that location. This area is in town adjacent to a traffic light and thus a clear recovery zone is inappropriate.

4. Location 3 - Madison

   At the State Route 16 and County Road 89 intersection, CVC endorses adding a traffic signal with the light weighted to east/west traffic and a mechanism for change triggered by approaching north/south traffic.

   CVC also endorses the option for access to the Madison Migrant Center off of County Road 89. A great many of the accidents that triggered the need for a safety project occurred on State Route 16 at the entrance to the Migrant Center.

5. Although not in the proposed project, CVC proposes that Caltrans implement an interim safety project of guard rails on State Route 16 at County Road 81. There have been fatalities in this steep arroyo with no shoulders to rely on.

Sincerely,

Pam Welch

Pam Welch, President
Capay Valley Coalition

Comment 16 – Randy Byrne

From: Suthahar, Sutha@DOT
To: Randy Byrne
Cc: Chamberlain, Duane@Yolo; Brannon, Tom L@DOT; Carroll, Chris S@DOT
Subject: RE: Comment on Yolo 16 Safety Improvement Project
Date: Friday, February 27, 2015 10:09:03 AM

Dear Mr. Byrne,

Thank you for your comments and I have forwarded this email the Project Team. You will receive a response in the near future.

Regards,

N. Sutha Suthahar, P.E.
Project Manager
Caltrans - District 3
(530) 741-5408

From: Randy Byrne [mailto:randyb17560@gmail.com]
Sent: Friday, February 27, 2015 9:56 AM
To: Suthahar, Sutha@DOT
Cc: Chamberlain, Duane@Yolo
Subject: Comment on Yolo 16 Safety Improvement Project

Name: Randy Byrne
Address: 17560 County Rd 85B, Esparto CA 95627
Email: randyb17560@gmail.com

Comment: I favor the traffic signal over the roundabout alternative due to concern over rerouting of traffic during roundabout construction. I am also concerned that a roundabout will create a steady stream of traffic during peak hours which will make turning onto Hwy 16 from intersecting county roads dangerous and time consuming.

I am assuming that construction of a roundabout will cause traffic detours compared to a traffic signal that will not require rerouting of traffic. I live on County Rd 85B which is used as an alternative to County Rd 21A or Hwy 16 to and from the casino. County Rd 85B has several small hills at dips at the southern end of 85B where it intersects with 21A. These dips cause blind spots as I exit from my driveway on County Rd 85B. Rerouting of traffic onto County Road 89->County Road 23->County Road 85B will pose a safety issue for residents of those roads as they attempt to exit or enter their property. Please advise as to rerouting issues during construction of the different alternatives proposed by Caltrans.

Supervisor Chamberlain, please also consider making the intersection of CR 85B and 21A a three way stop. Attempting to turn south on CR 85B from CR 21A is hazardous because traffic turning southbound on 85B does not have a stop and frequently this traffic exceeds the speed limit of 55 mph on CR 85B. When stopped on 21A and making a southbound turn on 85B, there is a blind spot for drivers coming southbound on 85B.

Thanks for your consideration. If you have any questions, please do not hesitate to contact me.

Randy Byrne
Esparto Resident
Board Member, FERL
Board Member, New Season community development organization

Comment 17 – Yolo County Farm Bureau

Yolo County Farm Bureau

P O Box 1556, Woodland CA 95776
530.662.6316 O * 530.662.8611 F
www.yolofarmbureau.org

PRESIDENT
Jeff Merwin
1ST VICE PRESIDENT
Joe F. Martinez
2nd VICE PRESIDENT
Nancy Lea
SECRETARY/TREASURER
Denise Sagara

March 9, 2015

CalTrans
ATTN: Chris Carroll
CalTrans District 3 Environmental Planning
703 B Street
Marysville, CA 95901

RE: Highway 16 Safety Project at three locations

Dear Mr. Carroll;

Thank you for the opportunity to provide comments regarding the revised proposal for Highway Safety improvements at three locations on Highway 16, in Madison, Esparto and Capay Valley. I am attaching copies of our previous correspondence as they support our comments.

Most of the report correctly identifies three separate projects, one is located at the intersection of County Road 89 and Highway 16 in Madison; one is located near the Intersection of County Road 86A to County Road 21A and Highway 16, near Esparto and the final is located in the Capay Valley.

The project description proposes to widen and pave shoulders to 8 feet AND provide a 20 foot Clear Recovery Zone. This pavement is proposed to have a 4:1 slope, however since 2003 we have pointed out that this will cause a problem for the movement of wide farm equipment. Please see letters dated April 2003, January 23, 2006, June 6, 2006, June 19, 2009 and photos we included of various farm equipment. We described the size of the equipment and the possibility of damage to wide equipment being run on a sloped road – if one of the axles isn't supported due to the slope of the road, it may start bouncing which could result in cracking and needing to be replaced. These are very expensive. We have repeatedly said some farm equipment is up to 20 feet wide.

Safe Movement of Farm Equipment

Since 2003 we have repeatedly requested in meetings and comments that safe turn lanes for farm equipment be incorporated in the project. As late as the September 2014 meeting, we requested a turn lane along Highway 16 from I-505 to Esparto so farm equipment can slow down and safely turn without impeding traffic flow. When questioned, CalTrans suggested the road could be widened so vehicles could go around the outside of a farm vehicle making a left hand turn. CalTrans discussion seemed to center on cost effectiveness, but from our perspective we think this is an absolute necessity for such a busy corridor. This project is proposed as a SAFETY project yet failing to provide infrastructure for the safe movement of farm equipment will not accomplish this goal. We have previously told CalTrans there are 9 access points to fields between I-505 and Esparto.

CalTrans
ATTN: Chris Carroll
CalTrans District 3 Environmental Planning
Highway 16 Safety Project
March 9, 2015
Page 2

This is a "must have" before Farm Bureau would consider withdrawing opposition to this project.

Intersection of State Route 16 and County Road 89, Madison

Farm Bureau can support Option A or C.
Farm Bureau totally opposes Option B.

We have written numerous letters detailing reasons for opposition to building a roundabout.

- CalTrans in this report states there is daily traffic of about 13,000 to 14,000 vehicles (see page 26).
- There are three high traffic times each day – from shift changes at the Casino.
- At 5:00 pm it is generally a five minute wait or longer to turn across County Road 86A at Highway 16 every day
- There are also events held at the Casino, generally twice a month that back up traffic to the off ramps of I-5
- CalTrans Engineers have suggested that stop lights in Esparto and I-505 exits will create gaps in traffic.
- These gaps will likely be closed by the time the vehicles get to Madison, regardless of the directions the vehicle are traveling as vehicles will either increase their speed to match the open conditions, or they will simply catch up to backed up traffic.
- Traffic sensing stoplights would be significantly more safe and local traffic friendly at all locations where CalTrans is proposing roundabouts. A roundabout is supposed to slow traffic so side traffic can merge. It's doubtful traffic will slow enough for big, slow moving farm equipment to merge, especially if it's a steady stream of traffic during the peak traffic times and/or dates.
- Drivers generally exhibit no awareness or concern about anything but getting to the casino.
- Seldom does any driver slow down to let cross traffic merge into Highway 16.
- CalTrans engineers have said they will make the roundabout large enough to accommodate our farm equipment. The current planned roundabout is 150 feet wide with 20 foot side roads, one lane around the roundabout.
- **If CalTrans proceeds with the installation of these roundabouts against the repeated concerns stated by local users, will CalTrans indemnify and hold harmless farmers and their employees for injuries that will result from accidents that will occur because of high speed, uninterrupted traffic traveling through these intersections at the same time as the farm equipment?**

Slow Moving Farm Equipment Signs

We have also requested in our various meetings over the years that CalTrans provide "Slow Moving Farm Equipment" (Man on a Tractor) caution signs along Highway 16 to no avail, yet these signs have been placed in numerous locations throughout Yolo County such as Old River Road between West Sacramento and Woodland, and SH 84 in Clarksburg. Due to the high volume of traffic on Highway 16 we believe that a flashing sign would help get driver's attention. One sign is needed near the I-505 to Madison (west side of the overpass) section of Highway 16 and the other anywhere close to Esparto would work. Farmers are very careful when driving on Highway 16 and do not want cars to run into their equipment for numerous reasons – first to avoid injuries, and to avoid their equipment being damaged.

CalTrans
ATTN: Chris Carroll
CalTrans District 3 Environmental Planning
Highway 16 Safety Project
March 9, 2015
Page 3

Metering Lights
There was lengthy discussion at the September 2014 meeting at the Farm Bureau about the possibility of installing metering lights to be triggered during high traffic periods. They would help create gaps in traffic. We strongly urge CalTrans to consider this **safety** option.

CalTrans Report on Growth
On Page 14 – Growth – it states that the traffic safety project does not increase capacity and has no potential for growth. We strongly disagree – widening the lanes with 20 foot recovery zones will only increase speeds as we believe vehicles will use this as a 2 lane road, with slower cars to be on the right and speedier cars in the inside lane. This defeats the purpose of "safety" in the clear recovery zone, and dramatically increases the likelihood of accidents when slow moving farm equipment is on the road.

Turn Lane at Highway 16 and 86A (not 86 – page 33)
We support having a turn lane at this intersection.

Short 4 lanes
Are the proposed widening of the intersections on page 18 State Highway 16 from County Road 21 A, to allow for turns?

Farmland Equipment
On page 20 the report states the average agricultural equipment averages 14 – 16 feet in width. The average includes equipment that may be 20 ft wide, and the road needs to accommodate the large farm equipment. Please review the photos submitted.

On page 22 the TCCR for SR-16 recommends paving the turnouts and widening shoulders "where feasible" to allow slow moving farm vehicles to pull off the highway and allow traffic to pass. This is not practicable with the volume of traffic SR16 experiences – we'd always be pulled off the road. **The expectation that farm equipment will move over needs to be deleted from this written proposal.**

We've never been able to get an answer from CalTrans about how much is the sloped ratio of 4:1 – which is this 4" to 1 foot? Currently Highway 16 is mostly flat which allows farm equipment to travel safely. This was discussed on page 1.

Construction Impacts
On page 35 the proposal states construction will cause less than significant impacts to traffic. Farm Bureau disagrees. Construction time is from spring through fall, the same time farmers are preparing, planting, cultivating, and harvesting fields – requiring the movement of farm equipment. We strongly suggest using electronic signs as people are used to them and are more likely to read them.

Rumble Strips
Farm Bureau supports installing rumble strips.

CalTrans
ATTN: Chris Carroll
CalTrans District 3 Environmental Planning
Highway 16 Safety Project
March 9, 2015
Page 4

Profile of State Route 16 Change

On page 43, Section 3, the proposal states the profile of SR016 will not be significantly altered, except at the vertical curve at the South Fork Willow Creek at Bridge No. 22-0093. Where is this? If it is in Madison the profile of SR 16 would have to be altered because to expand the road the large drainage ditch will have to be moved north, and then pipe installed. It would have to be constructed so the silt can be periodically removed after large storms as the Madison is a low area where flood waters surround it and deposit silt in the ditches.

Proposal Not Expected to Increase Traffic Volumes

On page 50 "the proposed project is not expected to increase the traffic volumes" yet it discusses that the Tribe has plans for a large expansion (currently on hold but likely to be reintroduced in the future). How can this enlarged roadway not be part of a plan to accommodate the increased traffic?

On page 97 – 2nd paragraph…the purpose of the proposed project is to improve safety, and although turn lanes would be added, the project would not increase overall roadway capacity and therefore, is not expected… We disagree and believe that widening the roads will increase traffic, now and when future homes and possible expansion of the casino in the future.

Dewatering of Irrigation Ditches

On page 53 there is a section about the dewatering of irrigation ditches. What is this? It sounds alarming.

Page 65 – Environmental Consequences

As a matter of information the croplands vary along the route CalTrans intends to take land. Croplands could be canning tomatoes, sunflowers, wheat, corn, safflower, alfalfa to almonds, walnuts, etc.

Thank you for your attention to our continued concerns about this project. If you have questions we would be happy to meet with you at a mutually convenient time. We hope to hear back from you soon.

Sincerely,

Jeff Merwin
President

Encl

Cc: California Farm Bureau Federation
Capay Valley
Yolo County Board of Supervisors
Yolo County Planning, Public Works and Environmental Services

March 9, 2015

Yolo County Farm Bureau

Photos of large farm equipment moved on Yolo County Roads

This tractor is 24'wide by 11.5' long

Cotton harvester - the module builder is 45' long and 10' wide, the harvester with header is 15' wide. Cotton is not currently grown in Yolo County, but it was for a while.

tomato harvester wheels are set for 60" beds but with the conveyor and the sides = 54' wide x 11' long

Tractor with dual wheels is 15' wide. These are an example of axles that could crack or break if the road slope is too great.

Sled is 36' wide x 15 long, not including the tractor required to move it

Carryall is 42' long by 9 ft wide

See next page - one of three pohotos of the same cultivator - different views

three photos of the same cultivator.

The cultivator is 21' from flag to flag and does not fold up smaller

Comment 18 – Yolo County

COUNTY OF YOLO

Office of the County Administrator

Patrick S. Blacklock
County Administrator

625 Court Street, Room 202 Woodland, CA 95695
(530) 666-8150 FAX (530) 668-4029
www.yolocounty.org

March 10, 2015

Chris Carroll
Environmental Coordinator
California Department of Transportation, District 3
Environmental Planning
703 B Street
Marysville, CA 95901

RE: Comments on the State Route 16 Safety Improvement Project Initial Study and Proposed Mitigated Negative Declaration

Dear Mr. Carroll:

Yolo County appreciates the opportunity to provide comments on the Initial Study and Proposed Mitigated Negative Declaration (IS/MND) for the State Route 16 Safety Improvement Project. The County also appreciates the California Department of Transportation's (Caltrans) efforts to improve traffic safety along State Route 16 (SR-16).

The mission of the elected officials and staff of Yolo County is to maintain and protect the quality of life for our residents. Our review of potential projects strives to ensure the safety of Yolo County residents; maintain their quality of life by protecting our infrastructure, environment, agriculture, historical integrity, and open space areas; improve the business climate within the County; and ensure the cost effective operation of County services. The County has prepared comments on the IS/MND with this mission in mind.

The comments below identify issues of concern to Yolo County that should be considered by Caltrans in the preparation of a Final IS/MND for the proposed project.

Chapter 1 – Proposed Project

Page 9 – For Location 1, clarification should be provided regarding how a design option will be selected. The two options include shifting the alignment north to avoid impacts to a residence and shifting the alignment south to avoid impacts to Taylor Creek. The discussion is unclear regarding how the conflicting impacts associates with these two options will be resolved.

Page 10 – More detail should be provided in the project description regarding proposed drainage improvements including specifically the culverts that are proposed to be replaced or extended.

This part of the roadway is in the flood plain and the details of culvert modification should be described so that potential impacts to the flooding can be assessed. Also, the Final IS/MND should describe the decision making process and the community's involvement in the decision to provide additional access to the Madison Migrant Center.

Page 11 – Similarly for Location 3, clarification should be provided regarding how a design option will be selected. The three options for the SR-16/CR-89 intersection include widening and adding a traffic signal, adding a roundabout, and widening and maintaining the existing all-way stop control. The County is supportive of the roadway improvements that best meet the SR-16 level of service and roadway safety requirements identified in the Intergovernmental Agreement Between the County of Yolo and the Rumsey Band of Wintun Indians (subsequently renamed Yocha Dehe Wintun Nation) Concerning Mitigation for Off-Reservation Impacts Resulting from the Tribe's Casino Expansion and Hotel Project (2002), while at the same time best meeting the community's interests. The County encourages Caltrans to consider the community's perspective and input when deciding on the specific design option for Location 3.

Chapter 2 – Affected Environment

Throughout this section, the mitigation measures should be more clearly articulated in terms of performance measures to ensure their effectiveness. The mitigation measures need to be clearly defined so they can be effectively implemented. As an example, the mitigation measures should use the imperative "shall" rather than the conditional "would." Also, the document uses terminology typically included in NEPA documents but is not identified as a NEPA document. The IS/MND should clarify whether the document is intended to be used to support NEPA compliance.

It would be helpful if the Final IS/MND sequentially numbered all of the mitigation measures included in the report for ease in tracking and inclusion in the Mitigation Monitoring and Reporting Program required by CEQA Guidelines Sec. 15097. Also, the Mitigation Monitoring and Reporting Program should be included in the Final IS/MND to provide the public with an opportunity to review the program prior to its adoption by Caltrans.

Page 19 – The text under the discussion of local plans does not accurately reflect the project's consistency with the Yolo County General Plan and Zoning Code. The project is expected to convert approximately 30 acres of farmland and the General Plan and Zoning Code require mitigation when a project converts farmland. The justification included in the IS/MND that "Since the project would not prevent the continued use of land adjacent to SR-16 right of way as farmland, the project is consistent with local zoning and the plans for this area" does not adequately address the project's inconsistency with County policies regarding agricultural land conversion. The Final IS/MND should include specific mitigation measures to address the conversion of farmland consistent with County policy.

Page 20 – The loss of 30 acres of Prime Farmland or Farmland of Local Importance, including 13 acres under Williamson Act contract, is a potentially significant impact under Section II of Appendix G of the State CEQA Guidelines and should be identified as such and mitigated. The

conclusion that "Within the context of the ample farmland supply in Yolo County, the proposed project would not pose a serious threat to this resource" is not substantiated in the IS/MND.

The document states that some areas of the existing highway outside of the new right-of-way may be returned to adjacent property owners pending negotiations with Caltrans right-of-way staff. Yolo County strongly encourages the return of these lands to the local property owners to allow their conversion to productive agriculture as a way to offset the project's impacts on agricultural lands.

Page 21 – The text describing Yolo County Code Section 8-2.407 references the County's previous Zoning Code that was superseded in July, 2014. The new updated Code can be accessed at http://www.yolocounty.org/community-services/planning-public-works/planning-division/zoning-code-update-program.

Page 23 – Yolo County does not agree with the determination that "less than significant impacts to farmlands, Williamson Act properties, and farmland equipment pursuant to CEQA are anticipated" and that "No avoidance, minimization and/or mitigation measures are required for Farmland."

Page 24 – The discussion of relocations and real property acquisition includes an overview of Caltrans' Relocation Assistance Program and states that the proposed project would require the partial acquisition of twenty six parcels, three of which contain residences. However, the discussion of environmental consequences does not specifically identify whether the residents within these three parcels will be required to relocate. Due to the significant disruption that forced relocations can have on the quality of life for affected residents, more clarity should be provided in the IS/MND regarding anticipated relocations and avoidance options that may be available.

Page 27 – The discussion of the project's affected environment for traffic and transportation includes traffic volumes and collision history but provides no discussion of existing or projected levels of service for the project intersections or roadways. To provide context for the proposed roadway improvements, the existing and projected levels of service should be identified. These levels of service should be compared to Caltrans' significance thresholds to determine whether the traffic volumes are exceeding the roadway's current capacities. This is particularly important in understanding which of the Location 3 improvement options would best accommodate the roadway's existing and future levels of service.

Page 39 – The discussion of visual/aesthetic mitigation measures states that Caltrans shall design and prepare a revegetation plan that would serve to minimize visual impacts. The mitigation states that the plan shall include planting concepts, specifications, riparian restoration and wetland planting plans, plant species, sizes and quantities. The County encourages the development of such a plan; however, it is difficult to determine if the implementation of this plan would actually reduce the project's visual impacts to a less than significant level. In order to support this conclusion, the Final IS/MND should include either a draft of the revegetation plan or a more detailed description of the revegetation plan's anticipated components. The revegetation plan should describe how these components would minimize the project's visual

impacts. Caltrans should, at a minimum, include conceptual landscape designs in the Final IS/MND to allow the public the opportunity to visualize the proposed landscaping prior to project approval.

The Final IS/MND should include an analysis of air quality impacts associated with construction activities or should, at a minimum, identify the standard mitigation measures required by the Yolo Solano Air Quality Management District for construction emissions in a non-attainment area, particularly PM10 dust emissions.

Page 42 – For Location 3, the IS/MND acknowledges that SR-16 is currently below the 100-year floodplain elevation between the town of Esparto and the Interstate 505 interchange and that the water surface would rise above SR-16 during a 100-year storm event. SR-16 flooding in this area occurs on a fairly regular basis and can cause significant delays for travelers. The flooding can also have serious consequences for residents in need of emergency services when it delays emergency vehicle access. The project proposes to modify the floodplain by altering SR-16 between Esparto and Madison.

However, the analysis and discussion of the environmental impacts associated with these modifications is very limited in the IS/MND. A more detailed discussion of the environmental impacts associated with the project's floodplain modifications must be provided in the Final IS/MND. This discussion should specifically identify how property owners between Esparto and Madison will be affected by these changes. In addition, Caltrans should explore options that integrate flood solutions into the project design for this area in order to achieve multiple project benefits.

Page 44 – More detailed analysis should be provided in the Final IS/MND to substantiate the conclusion that "Less than significant impacts to hydrology and floodplains pursuant to CEQA are anticipated." The preparation and inclusion of a hydraulic analysis in the Final IS/MND would be appropriate to determine the anticipated impacts upon existing base flood elevations in the area.

Page 51 – The discussion of water quality avoidance and minimization includes a long list of measures that would be implemented to reduce the discharge of pollutants during construction activities. However, little discussion is included regarding the implementation of long-term water quality protection measures following construction. The IS/MND should specify the long-term operational best management practices that will be implemented by Caltrans to ensure local water quality is not degraded.

Page 58 – The mitigation for the loss of Valley oak riparian habitat states that mitigation will occur onsite within Caltrans right-of-way and that if planting cannot be accomplished on the site, offsite mitigation options would be pursued. Without a more definitive mitigation measure for the loss of Valley oak riparian habitat, it is difficult to conclude that this impact would be reduced to a less-than-significant level. The Final IS/MND should identify a viable watering program for the trees as the habitat is being established and should more precisely define the performance objectives that would be achieved including the expected long-term survival rates for planted oak trees.

Page 62 – The first sentence in the discussion of the CEQA considerations for wetlands concludes that less-than-significant impacts would occur to wetlands and other waters with the implementation of mitigation measures. The second sentence then contradicts this statement by stating that because impacts to wetlands and other waters are less than significant, no mitigation measures are required. This contradiction should be clarified in the Final IS/MND. It seems clear from the subsequent text that wetland mitigation is required to offset the project's wetland impacts.

Page 63 – The mitigation identified for wetland impacts includes a creation ratio of one acre created for every acre disturbed (1:1 ratio). This mitigation should also include a preservation ratio that identifies the number of acres that would be preserved for every acre disturbed, as is typical for development projects. Including both the creation of new wetlands and the preservation of existing wetlands ensures that the project's short-term and long-term impacts are appropriately mitigated.

Page 71 – For threatened and endangered species, Caltrans should consult the preparers of the Yolo County Habitat Conservation Plan/Natural Community Conservation Plan to ensure consistency with the plan's mitigation requirements.

Page 74 – The statement that "Swainson's hawks have been observed foraging in fields adjacent to Location 3 of the proposed project, and CNDDB records indicates the presence of Swainson's hawk nests within 1 mile of the proposed project" establishes the fact that loss of foraging habitat caused by the project is potentially significant unless mitigated.

Pages 77 – Clarification should be provided in the Final IS/MND regarding Caltrans' commitment to providing appropriate mitigation for the loss of Swainson's hawk foraging habitat. The statement that "Project construction would result in approximately 30.82 acres of potential impacts to [Swainson's hawk] foraging habitat, however, abundant foraging and nesting habitat is directly adjacent to the project limits" appears to dismiss the need for mitigation. However, on page 80, the IS/MND states that "Caltrans would purchase credits if necessary for the loss of Swainson's hawk foraging habitat based on the ratios provided in the *Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (CDFW 1994)."The County strongly believes that mitigation for Swainson's hawk foraging habitat is required for this project.

Pages 77 thru 81 – Clarification should be provided in this section regarding the difference between the terms "Avoidance and Minimization Measures" and "Mitigation Measures." The County assumes that all avoidance and minimization measures will be treated similarly to mitigation measures and will be included in the project's required Mitigation Monitoring and Reporting Program. The Final IS/MND must clearly identify the biological mitigation measures that are being adopted under CEQA and explain with sufficient detail in the Mitigation Monitoring and Reporting Program how each measure will be implemented.

Page 81 – The source for the Swainson's hawk mitigation requirements (i.e., within five miles of an active Swainson's hawk [0.75:1] and within ten miles [0.5:1]) should be identified and justified.

Climate Change (pages 92 et seq.) – This section would typically include a quantification of the project's greenhouse gas emissions. The Final IS/MND should either include this quantification or provide justification for not presenting the greenhouse gas emission estimates.

We appreciate the close working relationship that the County has developed with Caltrans over the years and anticipate that Caltrans will sincerely consider the issues raised by the County in this letter. Thank you again for the opportunity to provide these comments. If you have any questions regarding the issues raised in this letter, please do not hesitate to contact Alex Tengolics at Alexander.Tengolics@yolocounty.org or 530-666-8068, or Eric Parfrey at eric.parfrey@yolocounty.org or 530-666-8043.

Respectfully,

Patrick S. Blacklock
Yolo County Administrator

cc: Yolo County Board of Supervisors

Comment 19 – Jim Rix

From: Suthahar, Sutha@DOT
To: Carroll, Chris S@DOT
Cc: Hagen, Mike J@DOT; Heryford, Steve P@DOT; Brake, Jim P@DOT; Parkinson, Michelle R@DOT
Subject: FW: Yolo 16 Safety Improvement Project
Date: Wednesday, March 11, 2015 11:18:50 AM

One more comment.

Regards,
Sutha

N. Sutha Suthahar, P.E.
Project Manager
Caltrans - District 3
(530) 741-5408

From: Jim Rix [mailto:jim.rix2011@gmail.com]
Sent: Wednesday, March 11, 2015 9:39 AM
To: Suthahar, Sutha@DOT
Subject: Yolo 16 Safety Improvement Project

Sutha, I just found the Open House comment sheet at home, and am emailing my response so it gets to you more quickly.

Name: Jim Rix
Organization: Resident who travels 16 from Capay Valley to Esparto or Madison every day.
Address: 20128 CR 79

Preferred alternative at CR 89: Roundabout, if you can do it without having to remove Guy's Corner.

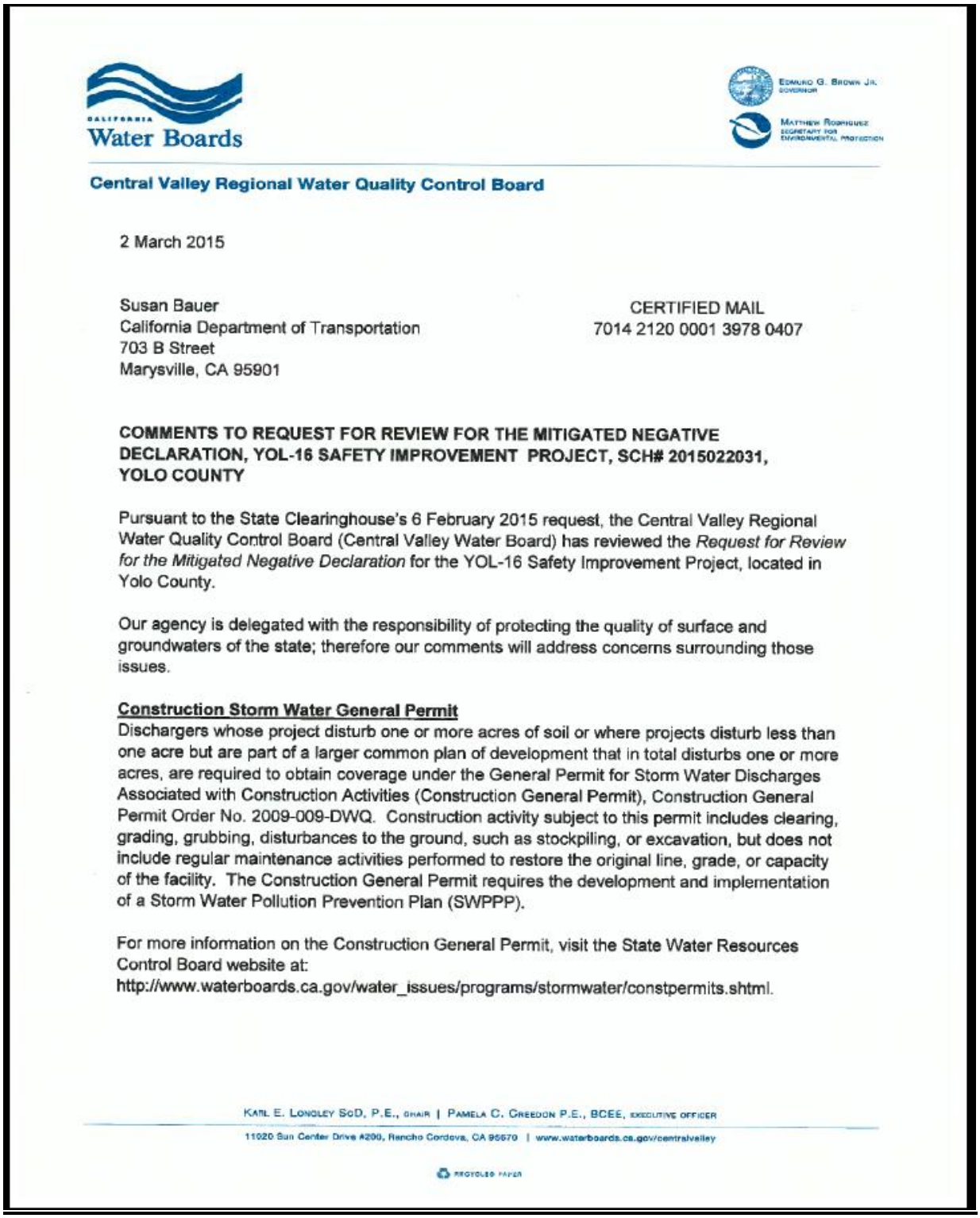
Comments: For all the projects planned on 16, do as little as possible to alter the road as it currently flows. Frankly, its not bad as it is, but I fear too much work will just cost more taxpayer money and take more time, messing up traffic on 16 for an extended period of time. For example, I think the amount of space being taken on each side of the road is excessive.

As you schedule the projects, please get them done quickly, especially the one in front of Road 79.

I missed the meeting...when are you planning to actually start the work, and how? Will you do one project at a time, or all at once?

Thanks,
Jim

Comment 20 – Central Valley Regional Water Quality Control Board



CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

2 March 2015

Susan Bauer
California Department of Transportation
703 B Street
Marysville, CA 95901

CERTIFIED MAIL
7014 2120 0001 3978 0407

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, YOL-16 SAFETY IMPROVEMENT PROJECT, SCH# 2015022031, YOLO COUNTY

Pursuant to the State Clearinghouse's 6 February 2015 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the YOL-16 Safety Improvement Project, located in Yolo County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

KARL E. LONGLEY SCD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

11020 Sun Center Drive #200, Rancho Cordova, CA 95670 | www.waterboards.ca.gov/centralvalley

RECYCLED PAPER

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program.
There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100**. Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory

Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

If you have questions regarding these comments, please contact me at (916) 464-4684 or tcleak@waterboards.ca.gov.

Trevor Cleak
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Comment 21 – State Clearinghouse CEQA Compliance Letter

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

March 11, 2015

Susan D. Bauer
California Department of Transportation, District 3
703 B Street
Marysville, CA 95901

Subject: YOL-16 Safety Improvement Project
SCH#: 2015022031

Dear Susan D. Bauer:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on March 9, 2015, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2015022031
Project Title YOL-16 Safety Improvement Project
Lead Agency Caltrans #3

Type MND Mitigated Negative Declaration

Description Caltrans proposes to improve the safety of three separate locations along YOL-16 (PM 20.5/21.3, PM 23.2/23.5 and at PM 28.2/31.6) in Yolo County. Limits are approximate. The scope of work would includes; Widening and paving shoulders to 8 feet, Providing a 20-foot wide clear recovery zone, installing rumble strips in the shoulders, adding a left turn pocket for CR-79, straightening two horizontal curves, replacing or extending culverts as needed. In addition, at the intersection of SR-16 and CR-89, the project would either; widen and add a traffic signal, or, add a roundabout, or, widen and maintain the existing all-way stop.

Lead Agency Contact

Name Susan D. Bauer
Agency California Department of Transportation, District 3
Phone 530 741 7113 **Fax**
email
Address 703 B Street
City Marysville **State** CA **Zip** 95901

Project Location

County Yolo
City
Region
Lat / Long
Cross Streets Various locations along SR 16
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways Hwy 16
Airports
Railways
Waterways Cache Creek
Schools Esparto HS
Land Use Residential, Agricultural

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Flood Plain/Flooding; Public Services; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 2; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Air Resources Board, Transportation Projects; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission

Date Received 02/06/2015 **Start of Review** 02/06/2015 **End of Review** 03/09/2015

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Water Boards

Central Valley Regional Water Quality Control Board

RECEIVED
MAR 04 2015
STATE CLEARING HOUSE

2 March 2015

Susan Bauer
California Department of Transportation
703 B Street
Marysville, CA 95901

CERTIFIED MAIL
7014 2120 0001 3978 0407

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, YOL-16 SAFETY IMPROVEMENT PROJECT, SCH# 2015022031, YOLO COUNTY

Pursuant to the State Clearinghouse's 6 February 2015 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the YOL-16 Safety Improvement Project, located in Yolo County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
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Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

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For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory

Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

If you have questions regarding these comments, please contact me at (916) 464-4684 or tcleak@waterboards.ca.gov.

Trevor Cleak
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Response 1 – Capay Hills Orchards

The responses to these comments are included in the original e-mail.

Response 2 – Lisa Leonard

The responses to these comments are included in the original e-mail.

Response 3 – Richard Higson

Caltrans appreciates the public's input, interest, and the comments made on the project.

Response 4A – John Bissell

The responses to these comments are included in the original e-mail.

Response 4B – John Bissell

Caltrans appreciates the public's input, interest, and the comments made on the project and acknowledges receipt of the additional information concerning rumblestrips.

Response 5 – Lloyd Wendland

Caltrans appreciates the public's input, interest, and the comments made on the project.

Response 6 – Greg Kringen

Caltrans appreciates the public's input, interest, and the comments made on the project.

Response 7 – Michael McDonald

Caltrans appreciates the public's input, interest, and the comments made on the project.

Response 8 – Colleen Fescenmeyer

The project manager for the Caltrans traffic calming project (03-4F170) in Esparto is Doug Lange. He can be reached at 530-741-4465. We note that the Esparto traffic calming project is separate from the safety project that is the subject of this IS/MND.

Response 9 – Colleen Fescenmeyer

This location referenced at Interstate 505 is outside of the project limits. The comment was referred to Caltrans traffic safety for review.

Response 10 – Duane Chamberlain

Caltrans appreciates the public's input, interest, and the comments made on the project.

Response 11 – Janine Gilham

Caltrans appreciates the public's input, interest, and the comments made on the project. Both the traffic signal and roundabout design options referenced in your comments are being considered and their respective pros and cons are being weighed.

Response 12 – John Whitehead

We appreciate your concerns regarding bicycle safety. In response to your comment letter Caltrans has revised the document to include additional information concerning bicycle safety and rumble strips on page 38 of this final environmental document.

Response 13 – Triple Creek Farm

Question 1 Response

The location you have noted, Location 2 (west of Co Rd 82B), has a higher concentration of accidents than the adjoining SR-16 segments and indeed has the highest along this corridor. There were 13 reported accidents between 2006 and 2011. This corresponds to a Safety Index of greater than 200 (which translates to a benefit/cost ratio of greater than 2:1). Caltrans proposes a design to meet the following Caltrans Highway Design Manual **minimum** design criteria for this type of facility:

- Vertical Profile curve length: If incoming grade minus outgoing grade is 2% or greater, minimum curve length is 10V (V=design speed). In this case the curve length will be 600 feet.
- Shoulder width: The paved shoulders will be 8 feet wide.
- Side slope: The slopes will be 4:1 or flatter.
- Clear Recovery Zone: This facility will have a 20-foot minimum clear recovery zone as measured from the fog line.

Question 2 Response

An acquisition of 2.51 acres is required from your parcel.

Question 3 Response

Consistent with the law and Caltrans' standard practices, a Caltrans appraiser will be contacting Mrs. Dahlin (Triple Creek Farm) in the near future to arrange an appointment to view the property and conduct an appraisal. This appraisal will need to be completed in order for Caltrans to determine compensation for the property. Please refer to Appendix C for information concerning Caltrans' relocation policies and procedures.

Response 14 – Paul Muller

Paragraph 1 Response

The posted speed limit is 35 mph and Caltrans proposes to install curb and gutter, so no clear recovery zone is required at this location; however, Caltrans will still need to construct a ditch to convey roadway drainage. The ditch, even with the steepest foreslope and backslope, along with the proposed 8-foot shoulder and 3-foot choker, pushes the catch point past the existing trees. Caltrans has spoken with the property owner, Mr. Kuhn, and he agrees with removing the trees.

Paragraph 2 Response

While Caltrans understands your concerns about the unique value of the Osage Orange trees, the studies conducted for this document do not identify the Osage Orange trees as a historic resource. Most of these trees do appear to be at or beyond our CRZ. However, we still need to construct a roadside ditch to convey roadway drainage. Efforts will be made to preserve the Osage trees during the project's final design phase.

Paragraph 3 Response

A bypass around the town of Esparto is not within the scope of this project and is not discussed in this document.

Paragraph 4 Response

Raising the profile of SR-16 in this location to address potential flooding issues is outside the scope of this safety improvement project and is not discussed in this document.

Paragraph 5 Response

The roundabout option at County Road 89 is designed not only to eliminate the need to stop, but also to reduce traffic speeds in that location. The ideal speed to navigate the roundabout is in the mid to high 20-mph range. In addition, the 8-foot shoulder will allow the CHP to better patrol the corridor and enforce the posted speed limit.

Response 15 – Capay Valley Coalition

Comment 1 Response

Caltrans proposes to replant Valley oak trees within the SR-16 view shed.

Comment 2 Response

Caltrans appreciates the public's input, interest, and the comments made on the project.

Comment 3 Response

The posted speed limit is 35 mph and we are proposing to install curb and gutter, so no clear recovery zone is required at that location; however, we still need to construct a ditch to convery roadway drainage. The ditch, even with the steepest foreslope and backslope, along with the proposed 8-foot shoulder and 3-foot choker, pushes the catch point past the existing trees. Caltrans has spoken with the property owner, Mr. Kuhn, and he agrees with removing the trees.

Comment 4 Response

Caltrans appreciates the public's input, interest, and the comments made on the project.

Comment 5 Response

County Road 81 is not within the project limits. The comment was referred to Caltrans Traffic Safety for review.

Response 16 – Randy Byrne

Paragraph 1 Response

The staged construction will be designed such that no traffic detours will be required for the construction at the County Road 89 intersection for either the roundabout, traffic signal or all-way stop (whichever is selected). Caltrans Traffic Operations identified that traffic currently uses County Road 21A/85B to and from the casino, and that will likely continue during and after construction.

An all-way stop-controlled intersection can meter the traffic and create a steady flow of downstream traffic when it is over capacity. That is the situation now at both the State Route 16/County Road 89 and Road 21A/Yolo Street intersections at peak times, which makes it difficult to find a gap downstream of these intersections. A majority of the westbound traffic will arrive at the proposed County Road 89 roundabout in platoons created from the signal at the I-505 ramp intersection. Since the traffic normally will not have to stop, it will go through the roundabout as a platoon, making it easier to find a gap downstream. The proposed signal at the Road 21A intersection will create gaps in the eastbound traffic that will also facilitate turning movements onto the highway.

Paragraph 2 Response

The staged construction will be designed such that no traffic detours should be required for the construction.

Paragraph 3 Response

The intersection of County Road 85B and County Road 21A is not within the State highway system.

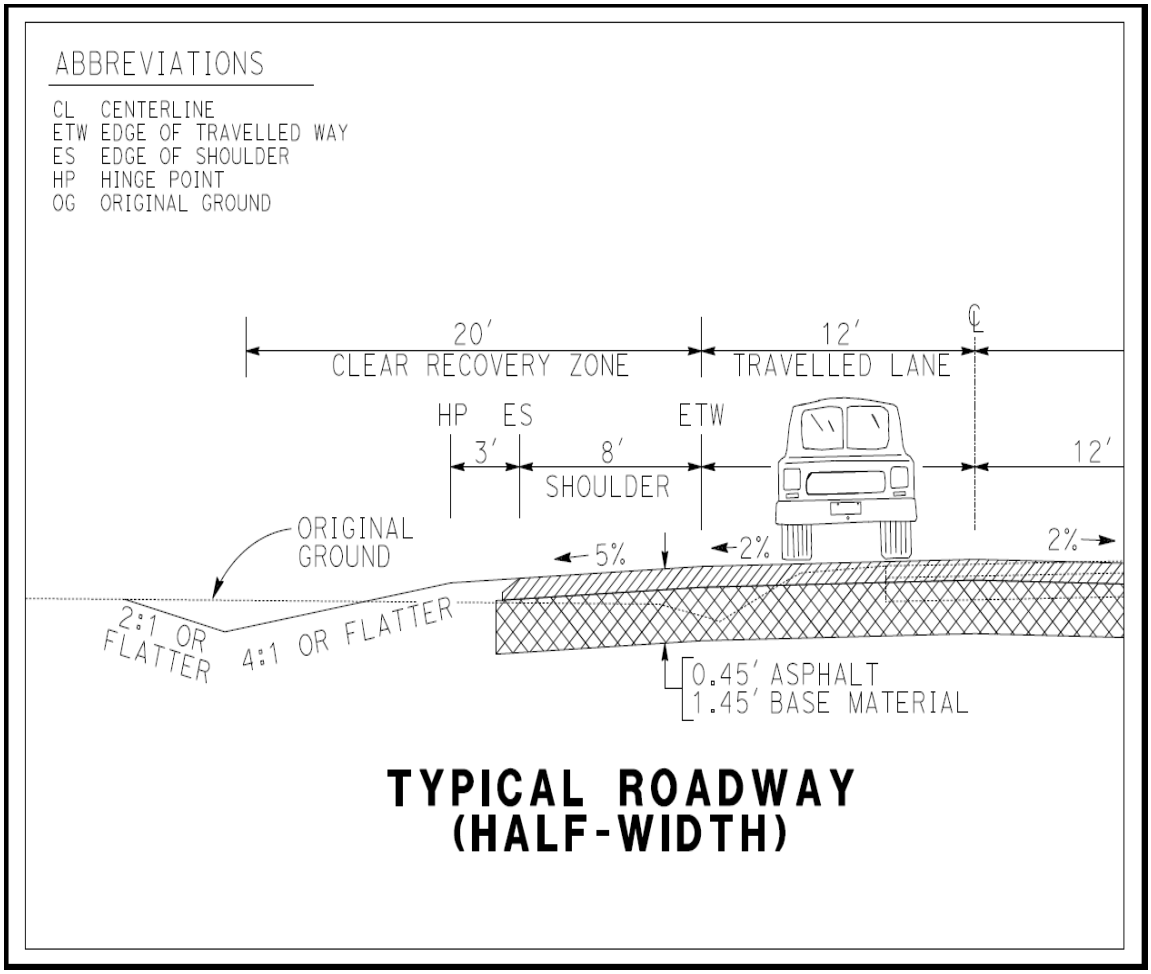
Response 17 – Yolo County Farm Bureau

Paragraph 3 Response

The roadway side slope beyond the edge of pavement will have a 4:1 slope. The traveled way will have a cross slope of 2%, and the shoulders will have a cross slope of 5%. At present, there are no shoulder and side slopes steeper than 2:1 that lead to ditches directly adjacent to the roadway. An example of the proposed roadway cross section can be seen on State Route 113 north of Robbins. In all cases, the roadbed and side slopes will be wider than currently exists. After the project is completed, it will be easier to drive farm equipment on the road.

Additional information can be found at:
http://www.dot.ca.gov/dist3/Projects/0C470/prjindex.htm

Below is a cross section diagram of the proposed shoulder.



Paragraph 4 Response

Due to a concentration of public connections to the roadway, two-way left turn lanes were determined to be necessary from 200 feet west of Tutt Street to County Road 90 and also approximately 500 feet on either side of County Road 86A.

Paragraph 5, Response (SR-16 & CR-89)

Caltrans acknowledges the Farm Bureau's listed concerns regarding the possible installation of a roundabout. By design, roundabouts increase safety and reduce the likelihood of serious/fatal injuries (head-ons and broadsides). The roundabout will also improve traffic flow relative to the existing four-way stop, reducing traffic congestion.

An all-way stop-controlled intersection can meter the traffic and create a steady flow of downstream traffic when it is over capacity. That is the situation now at both the State Route 16/County Road 89 and Road 21A/Yolo Street intersections at peak times, which makes it difficult to find a gap downstream of these intersections. A majority of the westbound traffic will arrive at the proposed County Road 89 roundabout in platoons created from the signal at the I-505 ramp intersection. Since the traffic normally will not have to stop, it will go through the roundabout as a platoon, making it easier to find a gap downstream. The proposed signal at the Road 21A intersection will create gaps in the eastbound traffic that will also facilitate turning movements onto the highway.

Paragraph 6 Slow Moving Farm Equipment Response

Caltrans could find no record in our traffic collision history of any collisions involving farm vehicles on SR-16 or in the project vicinity. Per Section 2C.49(03-04) of the California Manual on Uniform Traffic Control Devices, such signs should be considered where sight distance is restricted or the activity unexpected, neither of which is the case here.

Paragraph 7 Metering Lights Response

The need for metered lights will be investigated during the final design phase.

Paragraph 8 Report on Growth Response

This is not a capacity-enhancing project. The clear recovery zone consists of 8 feet of paved shoulder and 12 feet of unpaved surface. Beyond the shoulder, the clear recovery zone is not intended to be a traveled way.

Paragraph 9 Turn lane at SR-16 and CR-86A Response

Caltrans appreciates the public's input, interest, and the comments made on the project.

Paragraph 10 Short 4 Lanes Response

The widening is to conform to the existing County Road 21A width.

Paragraph 11 Farmland Equipment Response

Upon completion the road will be wider than currently exists which will allow more room for farm equipment. There are no pullouts proposed for this project.

The 4:1 slope is off the paved surface and we do not expect farm equipment to be traveling along it. There are currently drainage ditches along the sides of the road, which prevents farm equipment from traveling off the roadway. The slope ratio is a unitless ratio comparing the horizontal distance to the vertical distance of a slope. For example, a 4:1 slope has 4 horizontal feet for every 1 foot rise, or 4 horizontal inches for every 1 inch rise, etc.

Paragraph 12 Construction Impacts Response

Caltrans will consider the use of portable changeable message signs during construction to inform the public of roadway conditions.

Paragraph 13 Rumble Strips Response

Caltrans appreciates the public's input, interest, and the comments made on the project.

Paragraph 14 Profile of State Route 16 Change Response

The bridge (BR22-093, South Fork Willow Creek) is located just west of Oakdale Ranch Lane.

Caltrans will replace the drainage structure in Madison north of State Route 16 on County Road 89 with a structure that is large enough to be cleaned out and maintained by Caltrans crews.

Paragraph 15 Proposal Not Expected to Increase Traffic Volumes Response

In order to increase capacity of the road, Caltrans would have to add additional travel lanes. No additional travel lanes are proposed as part of this safety project. This project, which proposes to add left-turn pockets and 8 foot shoulders, will not increase the roadway capacity. Also see the Traffic and Transportation/Pedestrian and Bicycle Facilities section for additional discussion.

Paragraph 16 Dewatering of Irrigation Ditches Response

Dewatering is a temporary diversion that maintains the water flow downstream but creates a dry work area during construction.

Paragraph 17 Page 65 of DED Environmental Consequences Response

The final environmental document has been updated to reflect variation of crops grown along SR-16.

Response 18 – Yolo County

Response to Comment concerning Page 9: The criteria used to select a design option for Location 1 is taken from the Caltrans Highway Design Manual (HDM) and does include the following:

- Environmental Impacts
- R/W Impacts
- Cost
- Community Feedback

In the development of transportation projects, social, economic, and environmental effects must be considered fully along with technical issues so that final decisions are made in the best overall public interest. Proper consideration of these items requires that a facility be viewed from the perspectives of the user, the nearby community, and larger statewide interests. For the user, efficient travel, mode selection, and safety are paramount concerns. At the same time, the community often is more concerned about the aesthetic, social and economic impacts. The general population, however, tends to be interested in how successfully a project functions as a part of the overall transportation system and how large a share of available capital resources it consumes. Yolo County Public Works was part of the decision making team.

Design Option A would result in more environmental impacts as it requires a portion of Taylor Creek to be relocated and removal of oak trees. The estimated cost is approximately $1 million more than Design Option B due to the creek relocation, which would include extra earthwork, rock slope protection and erosion control, as well as a new drainage system under County Road 79. Design Option B, however, would have fewer right-of-way impacts because several properties that would be needed to build this option have already been acquired.

Response to Comment concerning Page 10

Preliminary inspection of the existing roadway cross-culverts and driveway culverts indicates that most of the culverts would likely need to be replaced and/or extended. A culvert will be replaced if the existing culvert is in poor condition. A culvert will be extended if the existing culvert is in good shape. At a minimum all culverts will need to be cleaned and possibly video inspected prior to establishing the final scope of work. All ditches will also need to be cleaned. The proposed project will only be extending or replacing the existing culverts, not increasing capacity.

On September 19, 2014, an outreach meeting between Caltrans, the operators and residents of the Madison Migrant Center, and officials from Yolo County was held at the Madison Migrant Center. The primary goal of the outreach meeting was to inform the

residents and operators of the migrant center about the project. The State Route 16 FHWA Road Safety Assessment Report prepared for Caltrans recommended relocating the migrant center access to County Road 89. The proposed Two Way Left Turn Lane (TWLTL) should improve the safety of the existing access. In addition, making the existing access right in/right out only should further improve safety.

Response to Comment concerning Page 11

The selection of a design option for the SR 16/Co Rd 89 Intersection Control (Location 3) will follow the methodology specified in Section 2, Chapter 12 of the Caltrans Project Development Procedure Manual. The Project Development Team (PDT) responsible for the selection of a design option included a representative from the Yolo County Public Works Division. The PDT carefully considered all the public comments received during the circulation of the Draft Environmental Document before making an informed decision. In this specific case, the PDT had multiple meetings with Yolo County Farm Bureau and Yolo County Public Works to share the safety benefits of selecting one option over the other. The PDT also organized a field testing of farm equipment and other large vehicles on a temporary roundabout setup in a field to demonstrate that the roundabout could be utilized by all types of vehicles including farm equipment without any difficulty. Yolo County Public Works was part of the decision making process.

Response to Comments concerning Chapter 2

Consideration will be given to changing the mitigation measures language from “would” to “shall”.

Caltrans does its best to separate out the NEPA language; however, due to permits and federal laws, we typically leave in some regulatory language that refers to NEPA.

All of the minimization and mitigation measures are in Appendix D under the appropriate environmental issue. It is not until the final design phase when the planners will have enough detailed information to develop an appropriate MMRP for the project. The environmental commitment record, in Appendix D outlines the mitigation measures Caltrans is planning to implement.

Response to Comments concerning Pages 19,20, and 23:

The need for safety improvements within the proposed project area means that some of this land must be acquired for the purpose of bringing the roadway up to current highway standards. The use of slivers of parcels of farmland in order to create a safer highway would not likely have a substantial impact to farming in this area. The project has been designed to avoid impacts as much as possible while meeting current highway standards. Within the context of the ample farmland supply in Yolo County, the proposed project would not pose a serious threat to this resource. The project proposes take of approximately 30 acres, which would result in a less than significant impact.

The County’s Zoning Code requires private interests to offset the conversion of agricultural land by providing for conservation easements at a 1:1 ratio. Caltrans is bound by state and federal environmental laws to ensure to the greatest extent possible that its activities do not

result in substantial impacts to the environment. The predominant zoning in the project area is for agricultural uses. The project would not prevent the continued use of land adjacent to SR- 16 as farmland. This project would not have a substantial effect on farmland and therefore no mitigation is proposed.

In addition, Caltrans received notification from the California Department of Conservation, Division of Land Resource Protection, that the proposed project is in compliance with the public acquisition procedures set forth in Government Code Sections 51290-51295.

A copy of the correspondence with the Department of Conservation can be found in Appendices F & G.

Response to Comment concerning Page 21:

References to the updated version of the County's Zoning Code has been added to this final environmental document.

Response to Comment concerning Page 24:

The residents living on the three identified parcels will be required to relocate. Following project approval, a Caltrans Relocation Agent will contact the displaced residents and ensure that eligible displacees receive their full relocation benefits, including advisory assistance, and that all activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources shall be available to all displacees free of discrimination. At the time of the first written offer, owner occupants are given a detailed explanation of Caltrans' Relocation Program and Services.

Response to Comment concerning Page 27:

The LOS table is provided below and it has been added to the Traffic and Transportation/Pedestrian and Bicycle facilities section of the document.

Peak Hour Level Of Service (LOS) Summary – County Road 89

SR 16/County Road 89	2014		2018		2023		2038	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
No Improvements	E	38 sec	F	55 sec	F	56 sec	F	57 sec
Signalize Intersection			B	11 sec	A	9 sec	B	14 sec
Install Roundabout			B	11 sec	B	15 sec	E (2034)	48 sec

Response to Comment concerning Page 39:

A draft Revegetation Plan (RP) will be prepared following final project engineering design. The RP will be used following construction to reestablish vegetation in disturbed construction areas. The RP serves to mitigate for both visual and biological impacts and will be jointly prepared by a landscape architect and biologist. The RP would include measures to replace any existing native trees that are removed or indirectly affected by construction of the proposed project. The RP would include planting and irrigation plans and specifications, riparian restoration plans,wetland planting plans, plant species, sizes, and quantities, planted screening for any residences to reduce light and glare, grading monitoring, success criteria and remedial actions.

Also in response to comments concerning Page 39:

Caltrans Standard Specifications require contractors to use Best Management Practices (BMP's) to effectively reduce and control emission impacts on air quality during construction. The provisions of Section 14-9 of the Caltrans Standard Specifications, Air Pollution Control, require the Contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the Yolo-Solano Air Quality Management District. These statutes can be found at: http://www.ysaqmd.org/documents/CEQAHandbook2007.pdf

Response to Comments concerning Pages 42 and 44:

Flood control measures are outside the scope of this limited safety improvement project, and therefore not being considered.

Response to Comments concerning page 51:

As discussed in Water Quality and Storm Water Runoff section beginning on page 45, the project will comply with the requirements of the appropriate permits and the Caltrans SWMP and SWDP and will incorporate treatment BMPs in the project design.

Response to Comment concerning Page 58:

Caltrans will work with the California Department of Fish and Wildlife (CDFW) on a Revegation Plan with the goal of no net loss to riparian oak habitat. There is currently no policy on "no net loss" for riparian oak habitat. However, Caltrans will make every effort to achieve this goal in coordination with the CDFW.

Response to Comment concerning Page 62:

Impacts to wetlands within project limits will be less than significant with the incorporation of mitigation measures. There will be no net loss of wetlands for the project. The referenced paragraph has been corrected.

Response to Comment concerning Page 63:

Regarding potential impacts to wetlands and other waters, Caltrans follows the guidance of the U.S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board

(RWQCB).Caltrans will work in coordination with the USACE and perform mitigation per the USACE 404 permit requirements. There would be no temporal loss. The goal is no net loss. Temporary impacts will be minimized through restoration. Permanent impacts will be mitigated by purchasing credits or via the in-lieu fee program at a ratio to be determined during the 404 permitting process.

Response to Comment concerning Page 71:

Pursuant to the CESA and Section 7 of the FESA, Caltrans will consult with the CDFW and the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS) for any threatened and endangered species affected by the project. Caltrans is not a signatory on the Yolo County HCP and is not a party to that agreement.

Response to Comment concerning Page 74:

Through the NES and BA that Caltrans prepared, the potential impacts to Swainson's hawk habitat due to the project are less than approximately 1% of available habitat within the entire project area. Swainson's hawk nest locations are concentrated in the Madison area of the project, and approximately 2% of potential foraging area in a 1-mile radius around the Madison area would be disturbed by the project. There is no indication that the project will cause a potentially significant loss of foraging habitat.

Response to Comment concerning Page 77:

Caltrans has determined that the project's impacts on Swainson's hawk foraging habitat will be less than significant.

Response to Comments concerning Pages 77-81:

The biological and other mitigation measures are clearly identified as mitigation throughout the document as are the avoidance and minimization measures. In addition, implementation of the mitigation measures is explained in sufficient detail.

Response to Comment concerning Page 81:

Caltrans is not proposing mitigation for the less than significant impacts to Swainson's hawk foraging habitat. The project includes no proposed activities that will create significant loss of Swainson's hawk habitat.

Response to Comment concerning Page 92:

CEQA Guidelines section 15064.4 indicates that a lead agency must make a good-faith effort to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Per the CEQA guidelines, a lead agency has the discretion to determine how best to do this by either quantifying GHG emissions using a model, using a performance based standard, or relying on a qualitative analysis. The lead agency has the discretion to choose the most appropriate method to analyze impacts on GHG emissions.

Per Caltrans guidance (Standard Environmental Reference), if the proposed project is a congestion relief project or will add capacity, a quantitative analysis using the EMFAC model should be completed. For other/non capacity increasing projects, a qualitative analysis is warranted.

As stated in the traffic chapter of the IS/EA, the proposed project does not add additional vehicular capacity and is not expected to appreciably affect traffic volumes. The project does not contain design elements, such as additional travel lanes, which would provide additional highway capacity. The climate change section discloses that construction emissions would be unavoidable, but that there is not anticipated to be an increase in operational GHG emissions.

Response 19 – Jim Rix

Caltrans appreciates the public's input, interest, and the comments made on the project. Caltrans estimates that it will take approximately 26 months to complete construction on Locations 1 and 3. Location 2 is estimated to take approximately 12 months to complete construction. Location 3 is the long segment from Esparto to I-505.

Response 20 – Central Valley Regional Water Quality Control District

Construction Storm Water General Permit – Caltrans will comply with Construction General Permit Order No. 2009-009-DWQ. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented.

Phase I and II Municipal Separate Storm Water Sewer System (MS4) Permits – Best Management Practices (BMP's) to the maximum extent practicable (MEP) will be implemented.

Industrial Storm Water General Permit – If this permit is required it will be obtained and followed.

Clean Water Act Section 404 Permit – If a Section 404 Permit issued by the USACOE is required for this project, the CVRWQCB will have the opportunity to review the permit prior to the initiation of construction activities.

Clean Water Act Section 401 Permit – Water Quality Certification – If a Water Quality Certification is required, it will be obtained from the CVRWQCB prior to the initiation of construction activities.

Waste Discharge Requirements – If the USACE determines that only-non-jurisdictional waters of the State are present in the proposed project area, the proposed project will obtain a Waste Discharge Requirement (WDR) permit issued by the CVRWQCB.

Regulatory Compliance For Commercially Irrigated Agriculture – The property obtained by Caltrans for the proposed project will not be used for commercial irrigated agriculture.

Low or Limited Threat General NPDES Permit – If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the U.S, the proposed project will obtain coverage under a National Pollutant Discharge Elimination System (NPDES) Permit.

Response 21 – State Clearinghouse CEQA Compliance Letter

This is a letter acknowledging Caltrans has complied with the State Clearinghouse review requirements for draft environmental documents. No response required.

CHAPTER 4 List of Preparers

The following Caltrans District 3 staff contributed to the preparation of this Initial Study:

Chris Carroll, Associate Environmental Planner. Contribution: Environmental Coordinator and Document Writer

Susan Bauer, Senior Environmental Planner. Contribution: Document Reviewer

Suzy Melim, Senior Environmental Planner. Contribution: Environmental Branch Chief and Document Reviewer

Erin Dwyer, Associate Environmental Planner (Archaeology). Contribution: Historic Property Survey Report (HPSR)

Kelley Nelson, Associate Environmental Planner (Natural Sciences). Contribution: Project Biologist, Natural Environmental Study (NES)

Chris Kuzak, Associate Environmental Planner (Architectural Historian). Contribution: Historic Resources Evaluation Report

Kathleen Grady, Landscape Architect. Contribution: Visual Impact Assessment (VIA)

Mark Melani, Associate Environmental Planner (Hazardous Waste). Contribution: Hazardous Waste Initial Site Assessment (ISA)

Saeid Zandian, Transportation Engineer (Air/Noise Specialist), Contribution: Air Quality and Noise Studies

Sean Cross, Transportation Engineer. Contribution: Water Quality Study

Steve Heryford, Transportation Engineer. Contribution: Project Design

Michelle Parkinson, Transportation Operations. Contribution: Traffic Analysis Report

Mike Hagen, Traffic Safety. Contribution: Traffic Safety Information

Lee Martin, R/W Agent. Contribution: R/W Acquisition

Sutha Suthahar, Project Manager. Contribution: Project Manager

Clark Townsend, Hydraulics. Contribution: Drainage Recommendations

CHAPTER 5 Distribution List

The following agencies, organizations, and individuals will be sent a copy of this MND.

Private Citizens

Greg and Cynthia Amaral
Nina Andres
Mark Armstrong
John Arnold
Bill Arnold
Joe and Dori Azzolino
Loy Baker
William and Malinda Baker
Noah Barnes
Frank and Lillah Barsotti
Michael and Marianne Beeman
Jane L. Berton
Harry Borg
Linda Bowser
Anna and Andrew Brait
Robert and Shirley Bramlett
Harvey Burlison
Clifford and Marian Cain
Elizabeth and Kevin Campbell
Becky Carson
John Ceteras
Anne E. Chandon
Jim Chandon
Charles Clements
Wyatt Cline
Lorry Cummings
John and Carmel Dalton
Calos De La Fuente
Jay and Lillian Delos Reyes
David Bennitt Denebeim
Matt Dobbin
Nicholas Echarte
Gordon W. Elden
Douglas E.Erickson
Nicole, Vincent, and Victoria Faccioto
Terry Farnham
Alfred J. Favro
Hendrik Feenstra
Pelayo Fernando
George L. and Wiliam G. Fiske
Heather Fiske
Moira Fitzgerald
Alan Friedman
Eleanor Kay Friedman
Nona Garrison
Gilberto and Irma Gifueroa
Joseph Gimenez
E.B. George, c/o Robert Glauz
Marie L. Gravink
Frank and Barbara Greer
Ann Grube
Leslie Guidera
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Mabel F. Hansen
William W. Harris
Arthur Harris
Patricia Harrison
Alfred Hayes
Mabel Hensen
Walter Hensen
Ann Herger Trust
Alexander Hernandez
Hans and Barbara Herren
Craig Hoffman
Jack and Phillis Huie
Mowe Hy
Jimmie Icardo
George and Helga Jandera
Rick Jenness
Glen and Lyle Jensen
Lyle Jensen
Ronald Jones
Melissa Jordan
John Felix Karrer
Rae and Roa Keehn
Eugene and Frieda E. Knauss
Ronald and Rae Kuhn
Ardith Laing
Derek Larsen
Philip Lee
Juan and Margarita Lerma
Tony Lopes
Carol Lorenzo
Jan Lowrey
Ramona Manas
Nancy Mapes
Pamela Marvel
Larry Mayer
Brian McCrady
Anne and Michael McDonald
Doralea McKissick
Don McNab
Michael Middleton

Santi and Verline Miguel

Russell D. and Linda L. Mitchell
Robert Morris
Paul Muller
Mark and Dawn Myers
Mark Nichols
Herbert and Ruby Nitta
Audrey Nitta Trust
Dominic Norman
Mike and Donna O'Kane
Charles Opper
Nicola and Enina Orciuoli
James Ousey
Leonard and Catherine Overhouse
Donald Owings
Elizabeth Pearson
Ellen A. Peckham
Jan Penrose
Ken and Linda Pillard
Michael Plyer
Karen Powell
Wes Preston
Michael Rabaino
Jose Ramirez
Aziz Amin Khaled Ramish
Dru Rivers
Michael E. Robinson
Craig H. Rockwell
Frank Rose
Richard Russell
Carl and Nadine Salonites
Conrad and Mary Salvador
Jose and Guadalupe Sandoval
Derek Schatz
Charles Schaupp
Stephen E. Schuchman
Craig D. Schwarz
Becky and Dave Schwenger

William E. Seltzer
Harold and Bobbie Sheldon
John Carroll Smith
Thomas and Wanda Spiva
John Springer
Gladyce Stamates
Alice Stephens
Cordelia Ann Stephens
John and Meredith Stephens
Brent Stephens
John Stephens et al
Summer Stone
George Story
Cathy Suematsu
Ann Taber
Greta and Harmon Taber
Ray and Betty Taber
Ruth Taber
Brady Tharp
Lisa Thomas
Don and Merriel Tompkins
Matt Trask
Kevin Trigales
Paul Turnbull
Fred and Mary Vanucci
Danny Vigil
Kin Soi Voong
Helen Harris Voss
Barry and Kristy Wells
Lloyd and Ann Wendland
Barney Whitfield
Nancy Wilkison
Paul Williams
John Wilson
Theresa Wright
Muriel J. Yates
Veon D. Zentner

Businesses/Groups/Agencies

Agriculture Industries
Blacksmith Homes Llc
Bola Markets
Cache Canyon Whitewater River Trips
Cache Creek Citizen's Advisory
Cache Creek Conservancy
California Association of Bicycling Organizations
California Department of Conservation
California Department of Fire
California Department of Fish and Game
California Department of Forestry
California Department of Toxic Substances
California Department of Water Resources
Capay Valley Vision
Capay Valley Coalition
Central Valley Regional Water Quality Control Board
Capay Ranch Inc
Chandon Ranch Partnership
Chickohominy Lands Inc.
Cortina Rancheria
Davis Bike Club
Dunmore Communities
Emerald Homes LLC
Esparto Chamber of Commerce
Esparto Citizens Advisory Committee
Esparto Community Service District
Esparto District Chamber of Commerce
Esparto Fire Department

Esparto General Plan Advisory Committee
Esparto Regional Library
Esparto Unified School District
Fully Belly Farm
Giumarra Farms
Gold Oak Ranch
Gordon Farms
Guinda Community Methodist Church
Guinda Grange
Herbst Mfg Inc
Hwy 16 Safe Communities Coalition
JB Communications
John Deterding Company
Kathyanna Ranch LLC
KS Farla LLC
Landpeople
Law Offices of Donald B. Mooney
Law Offices of J. William Yates
Lehman English Kelly & O'Keefe
M & P Fam Ltd Partnership
Madison Community LLC
Madison Community Services District
Madison Fire Protection District
Madison Hwy 16 LLC
Madison Migrant Housing Center
Madison Service District
Manas Ranch Trust
MIG Berkeley
Native American Heritage Commission
Natural Resource Conservation Service
Nishi Farms Inc.
Rumsey Farms
Rumsey Improvement Club
Rumsey Indian Rancheria Of Wintun
Rumsey Rancheria Fire Department
Ryder Homes
SACOG
Sacramento Wheelmen
Sagara Mas & Sons Inc.
Sal & Al Giumarra Farms
Sayr Industries
Sierra Club - Yolano Group
SLH Holdings Inc.
Solano Concrete Co.
St. Martin's Mission
State Office of Historic Preservation
State Reclamation Board
State Water Resources Control Board
Syar Industries Inc.
Taylor Ranch
Tim McIsaac Agriculture Industries
Tuttle Charles W Jr. Trust
Triple Creek Farms
United States Post Office
US Army Corps of Engineers
US Environmental Protection Agency
US Fish and Wildlife Service
Warner ME
Water Resources Association of Yolo County
Western Development
Whitewater Adventures
Wintun Environmental Protection Agency
Yolo Basin Foundation
Yolo County
Yolo County Agricultral Commissioner
Yolo County Board of Supervisors
Yolo County Farm Bureau
Yolo County Flood Control & Water Conservation District
Yolo County Historical Society
Yolo County Housing Authority
Yolo County LAFCO
Yolo County Library
Yolo County Planning & Public Works
Yolo County Clerk-Recorder
Yolo County Resource Conservation District
Yolo County Sherrif Dept.
Yolo County Transportation District (Yolo Bus)
Yolo Farm Bureau
Yolo Land Trust
Yolo Ranches Stephens
Yolo-Solano Air Quality Management District

Appendix A. CEQA Checklist

CEQA Environmental Checklist

03-YOL-16	**20.5/31.6**	**03-0C470** **03-0000-0015**
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
"No Impact", "Less Than Significant Impact" and "Less Than Significant with Mitigation" determinations is based on the project scope, field reviews, and the Visual Impact Assessment (VIA)				
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

"No Impact" and "Less Than Significant Impact" determinations are based on the project scope and field reviews.

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

"No Impact" and "Less Than Significant Impact" determinations are based on the project scope, field reviews, and the Air Quality Report.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

"No Impact" and "Less Than Significant Impact" and "Less Than Significant With Mitigation" determinations are based on the project scope, field reviews, and the biological reports.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
"No Impact" and "Less Than Significant Impact" determinations are based on the project scope, field reviews, and the Cultural Resources Report.				
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
v) Landslides?				
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

"No Impact" and "Less Than Significant" determinations are based on the project scope and field reviews.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

"No Impact" and "Less Than Significant Impact" determinations are based on the project scope, field reviews and the Initial Site Assessment (ISA).

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

"No Impact" and "Less Than Significant Impact" determinations are based on the project scope, field reviews and the water quality report.

X. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community?	☐	☐	☐	☒
b)Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

"No Impact" and "Less Than Significant Impact" determinations are based on the project scope and field reviews.

XI. MINERAL RESOURCES: Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

"No Impact" determinations are based on the project scope and field reviews.

XII. NOISE: Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

"No Impact" and "Less Than Significant Impact" determinations are based on the project scope and field reviews.

XIII. POPULATION AND HOUSING: Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
"No Impact" and "Less Than Significant Impact" determinations are based on the project scope and field reviews.				
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
"No Impact" and "Less Than Significant Impact" determinations are based on the project scope and field reviews.				
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
"No Impact" determination is based on the project scope and field reviews.				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐
"No Impact" and "Less Than Significant Impact" determinations is based on the project scope and field reviews.				
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

"No Impact" and "Less Than Significant Impact" determinations are based on the project scope and field reviews.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Appendix B. Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
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March 2013

NON-DISCRIMINATION
POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

MALCOLM DOUGHERTY
Director

"Caltrans improves mobility across California"

Appendix C. Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

DECLARATION OF POLICY

"The purpose of this title is to establish a ***uniform policy for fair and equitable treatment*** of persons displaced as a result of federal and federally assisted programs in order that such persons ***shall not suffer disproportionate injuries*** as a result of programs designed for the benefit of the public as a whole."

The Fifth Amendment to the U.S. Constitution states, "No Person shall…be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation." The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 CFR Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

FAIR HOUSING

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

RELOCATION ASSISTANCE ADVISORY SERVICES

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are "decent, safe and sanitary." Nonresidential displacees will

receive information on comparable properties for lease or purchase (for business, farm and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable "decent, safe and sanitary" replacement dwelling, available on the market, is offered to them by Caltrans.

RESIDENTIAL RELOCATION PAYMENTS

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

Moving Costs
Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until the Department obtains control of the property in order to be eligible for relocation payments.

Purchase Differential
In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property), may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum combination of these three supplemental payments that the owner-occupant can receive is $22,500. If the total entitlement (without the moving payments) is in excess of

$22,500, the Last Resort Housing Program will be used (see the explanation of the Last Resort Housing Program below).

Rent Differential
Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable "decent, safe and sanitary" replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the *Down Payment* section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 180 days, in addition to moving expenses, is $5,250. If the total entitlement for rent supplement exceeds $5,250, the Last Resort Housing Program will be used.

To receive any relocation benefits, the displaced person must buy or rent and occupy a "decent, safe and sanitary" replacement dwelling within one year from the date the Department takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

Down Payment
The down payment option has been designed to aid owner-occupants of less than 180 days and tenants in legal occupancy prior to Caltrans' initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of $5,250. The one-year eligibility period in which to purchase and occupy a "decent, safe and sanitary" replacement dwelling will apply.

Last Resort Housing
Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the $22,500 and $5,250 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced.
- Specific arrangements needed to accommodate any family member(s) with special needs.
- Financial ability to relocate into comparable replacement dwelling which will adequately house all members of the family.
- Preferences in area of relocation.
- Location of employment or school.

NONRESIDENTIAL RELOCATION ASSISTANCE

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows:

Moving Expenses
Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the right-of-way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to $2,500, for reasonable expenses actually incurred.

Reestablishment Expenses
Reestablishment expenses related to the operation of the business at the new location, up to $10,000 for reasonable expenses actually incurred.

Fixed In Lieu Payment
A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than $1,000 nor more than $20,000.

ADDITIONAL INFORMATION

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, *except* for any federal law providing local "Section 8" Housing Programs.

Any person, business, farm or nonprofit organization that has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans Right-of-Way. California's law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

Appendix D. Avoidance, Minimization and/or Mitigation Summary

Avoidance / Minimization Measures

Relocations and Real Property Acquisition

- Following project approval, Caltrans Right of Way Staff would coordinate with affected property owners concerning compensation for loss of property.

- A Relocation Agent would contact all displacees after final environmental approval. The Relocation Agent would ensure that eligible displacees receive their full relocation benefits, including advisory assistance, and that all activities will be conducted in accordance the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (see Appendix C). Relocation resources shall be available to all displacees free of discrimination. At the time of the first written offer to purchase, owner occupants are given a detailed explanation of Caltrans' Relocation Program and Services.

Utilities/Emergency Services

- All emergency response units in the project area would be notified of the project construction schedule and would have access to SR-16 throughout the construction period.

Traffic/Transportation

- Restrictions on when lanes may be closed.

- Public notices and press releases provided in local newspapers before major stage or traffic shifts.

- A Construction Zone Enhanced Enforcement Program (COZEEP) with the CHP during major construction that affects traffic, such as stage changes and traffic shifts.

- Changeable message signs to alert motorists to unusual or new conditions and any delays that develop

Visual/Aesthetics

- The application of erosion control to all disturbed areas would be required. These areas shall be returned to their preconstruction conditions once construction is completed. The erosion control shall consist of a seed mix of grasses and forbs that are native to the area.

- If Option B is built (part of location 1), the Caltrans Landscape Architecture staff would design a landscape and erosion control plan.

- Tree removal that occurs along or near residential development would be replanted in kind with the type of trees and vegetation that has been removed. This would provide screening for residences to help reduce light and glare, and to help reestablish and maintain the rural feel of the surrounding area.

- Similar ornamental variety or native trees shall replace large trees that need to be removed due to the construction activities so long as they do not interfere with roadway functions or utilities. Re-vegetation within clear recovery zones would consist of native grasses and shrubs to facilitate sight distance requirements, reduction of obstacles and erosion concerns.

Cultural Resources

- The portions of the cultural sites outside the ADI would be protected against inadvertent damage during project construction through the establishment of ESA and preparation of an ESA Action Plan. The ESA Action Plan will ensure proper implementation of Section 106 Programmatic Agreement Stipulation X, and to ensure compliance with CEQA, and for state-owned historic properties, PRC Section §5024.

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

- If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the district archaeologist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Hazardous Waste/Materials

- Any R/W that is going to be acquired would be tested for potential soil contamination prior to acquisition. Soils with non-hazardous levels of ADL may be reused within the project limits. Soils with hazardous levels of ADL would be disposed of at an appropriate landfill.

- SSP 15-1.03B regarding the removal of white and yellow thermoplastic paint striping is required.

Natural Communities

- Areas of Valley oak riparian habitat within the project area that are not directly affected would be designated as ESAs on the project plans and in the project avoidance specifications. The boundaries of the ESA would be clearly marked in the field by the installation of a temporary fence. ESAs would be implemented as a first order of work and will remain in place until all construction activities are complete.

- Removal of native vegetation would be confined to the minimal area necessary to facilitate construction activities.

Wetlands and Other Waters

- Where working areas encroach on live or dry streams, or wetlands, RWQCB-approved physical barriers adequate to prevent the flow or discharge of sediment into these systems would be constructed and maintained between working areas and streams and wetlands. During construction of the barriers, discharge of sediment into streams will be held to a minimum. Discharge would be contained through the use RWQCB-approved measures to keep sediment from entering protected waters.

- Oily or greasy substances originating from the contractor's operations would not be allowed to enter or be placed where they would later enter tributary waters.

- Asphalt concrete would not be allowed to enter tributary waters.

- Wetlands and other waters would be delineated as ESAs on the project plans and in the project specifications. The boundaries of the ESA would be clearly marked in the field by the installation of a temporary fence. ESAs would be implemented as a first order of work and would remain in place until all construction activities are complete.

Animal Species

Migratory Birds-Vegetation Nesting Species

- Removal of native vegetation would be confined to the minimal area necessary to facilitate construction activities.

- Vegetation removal on the project site would be conducted between September 1st and February 14th, outside of the nesting season (generally) for most migratory bird species in the project area. If vegetation removal must take place outside of this period, a qualified biologist would conduct pre-construction surveys for active bird nests within 0.25 mile of all construction activities. These surveys would be conducted no less than 14 days and no more than 30 days before the beginning of construction. If construction activities are delayed or suspended for more than 30 days after the pre-construction survey, the areas will be resurveyed. If no active bird nests are found, no further measures are necessary. If active bird nests are identified, construction activities within 500 feet of these areas would be postponed until USFWS and/or CDFW have been consulted, or after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site. No known active nests would be disturbed without permit or other authorization from the USFWS and/or the CDFW.

Tricolored Blackbird

- The avoidance and minimization measures for migratory birds would be applied to minimize the potential to impact the tricolored blackbird that may utilize potential foragaing habitat within project limits prior to construction. If this species is observed, appropriate resource agencies would be coordinated with.

Migratory Birds-Structure Nesting/Roosting Species/Bats

- To avoid potential impacts to nesting swallows or roosting bats, exclusionary devices would be installed where feasible to prevent nesting or roosting on box culverts and bridges within the project area. The installation of the exclusionary devices would occur during the fall or winter after fledging and before initiation of breeding activities (between September 1st and February 14th). A biological monitor would periodically inspect the exclusionary netting to ensure its effectiveness.

- Nest removal is another method of preventing structure nesting/roosting species. CDFW considers February 15 to September 1 to be the swallow nesting season. Old nests or nests under construction would be washed down with water or knocked down with a pole. Swallows are strongly attracted to old nests or to the remnants of deteriorated nests, so all traces of mud would need to be removed. Because cliff

swallows persistently rebuild nests for most of the breeding season, the nest removal method will require many consecutive days to prevent them from nesting using this method.

Burrowing Owl

- The avoidance and minimization measures for migratory birds would be applied to minimize the potential to impact the burrowing owls that may inhibit the project area prior to construction.

Threatened and Endangered Species
Valley Elderberry Longhorn Beetle (Avoidance and Minimization Measures)

- Before initiation of any vegetation removal, grading, or any other ground-disturbing activities, a qualified biologist would conduct mandatory worker awareness training for all construction personnel. The awareness training would provide information on how to avoid impacts to biological resources, particularly special-status species. The training will also inform workers of the penalties for not complying with mitigation requirements. If new construction personnel are subsequently added to the project, they too would receive the training.

- Prior to any ground-disturbing activities associated with the project, Caltrans shall install 20 feet of 4-foot-tall temporary, plastic mesh construction ESA fence where possible, from the driplines of elderberry shrubs that are not to be removed. The fencing is intended to prevent encroachment by construction vehicles and personnel. The exact location of the fencing would be determined by a qualified biologist, with the goal of protecting VELB habitat. The fencing would be strung tightly on posts set at a maximum interval of 10 feet. The fencing would be installed in a way that prevents equipment from enlarging the work area beyond what is necessary to complete the work. The fencing would be checked and maintained weekly until all construction is completed.

- A sign would mark this buffer zone and state the following ‘This is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines and imprisonment’. The fencing and a note reflecting this condition would be shown on the construction plans. Signs would be legible from a distance of 20 feet and must be maintained for the duration of construction.

Giant Garter Snake (Avoidance and Minimization Measures)

- Construction activity within suitable habitat would be conducted between May 1 and October 1 to minimize impacts to this species. This is the active period for giant

garter snakes and thus direct mortality is lessened because snakes are expected to actively move and avoid danger.

- Clearing would be confined to the minimal area necessary to facilitate construction activities. Fencing and signs would designate avoided giant garter snake habitat within or adjacent to the project area as an ESA.
- Construction personnel whould receive USFWS-approved worker environmental awareness training. This training instructs workers to recognize giant garter snakes and their habitat(s).
- Twenty-four hours prior to construction activities, the project area would be surveyed for GGS. Surveys of the project area would be repeated if a two-week or greater lapse in construction activity occurs. If a GGS is encountered during construction, activities will cease until appropriate corrective measures have been completed or it has been determined that the giant garter snake will not be harmed. Any sightings and any incidental take would be reported to the USFWS and CDFW immediately by telephone at (916) 414-6600.
- Any dewatered habitat shall remain dry for at least 15 consecutive days after April 15th and prior to excavating or filling of the dewatered habitat.
- After completion of construction activities, any temporary fill and construction debris would be removed and, wherever feasible, disturbed areas restored to pre-project conditions. Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.

<u>Swainson's Hawk (Avoidance and Minimization Measures)</u>

- If there are any new nest trees within the project limits prior to construction, they would be designated as ESAs and would be delineated on the project plans and in the project specifications. The boundaries of the ESA will be clearly marked in the field by the installation of a temporary fence. ESAs would be implemented as a first order of work and will remain in place until all construction activities are complete.

- Before initiation of any vegetation removal, grading, or any other ground-disturbing activities, a qualified biologist would conduct mandatory worker awareness training for all construction personnel. The awareness training would provide information on how to avoid impacts to biological resources, particularly special-status species. The training would also inform workers of the penalties for not complying with mitigation requirements. If new construction personnel are subsequently added to the project, they too would receive the training.

- Removal of native vegetation would be confined to the minimal area necessary to facilitate construction activities.

- The avoidance and minimization measures (tree removal during non-nesting season) for migratory birds would be applied to minimize the potential to impact nesting Swainson's hawk.

- Monitoring for Swainson's hawk would take place as appropriate during construction from March to September.

Tricolored Blackbird (Avoidance and Minimization Measures)

- The avoidance and minimization measures for migratory birds would be applied to minimize the potential to impact the tricolored blackbird. If this species is observed, appropriate resource agencies would be coordinated with.

Water Quality and Storm Water Runoff

- Prevent Downstream Erosion – design of drainage facilities to avoid causing or contributing to downstream erosion. Drainage outfalls, when appropriate, would discharge to suitable control measures.

- Stabilize Disturbed Soil Areas – design would incorporate stabilization of disturbed areas (when appropriate) with seeding, vegetative, or other types of cover.

- Maximize Existing Vegetative Surfaces – design would limit footprints of cuts and fills to minimize removal of existing vegetation.

- This project would incorporate treatment BMPs to the maximum extent practicable with an emphasis on biofiltration swales and detention basins.

- The contractor will be responsible for implementing stormwater BMPs pursuant to the General Construction Permit (GCP) and the SWPPP required by the permit to ensure that erosion and run-off would not contribute to additional pollutants in surface water bodies in the vicinity of this project. Implementing aggressive BMPs would minimize soil transportation during construction. Aggressive and redundant placement of BMPs in areas that are tributaries to Cache Creek, especially at creek crossings, or in areas with elevated levels of mercury would provide additional protection.

- No soil disturbing work would be performed during the wet season (October 15th – April 15th). This will reduce the likelihood of discharges from the site.

- This would be a multi-year project and it would be necessary to ensure that BMPs have been fully implemented during the wet season to stabilize slopes and prevent erosion, especially in the vicinity of surface water bodies.

- Clearing and grubbing (digging up roots and stumps) would be done in the dry months of the year (April 15th – October 15th) to reduce the likelihood of erosion occurring during and immediately following construction of the project. Revegetation of disturbed surfaces would be in accordance with plans developed by a Caltrans Landscape Architect. Preservation of existing vegetation to provide erosion and sediment control benefits would be maximized on this project. Contract plans would delineate ESAs to help preserve existing vegetation.

- The placement of Rock Slope Protection (RSP) to currently unstable slopes, as well as the addition of detention basins, swales, and other stormwater design improvements would be implemented into this project to ultimately improve the water quality of the creeks within the project limits.

- The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS # 000003, (Order # 99-06-DWQ), issued by the State Water Resources Control Board.

- The contractor would be required to prepare a SWPPP containing effective erosion and sediment control measures. These measures must address soil stabilization practices, sediment control practices, tracking control practices, and wind erosion control practices. In addition, the project plan must include non-storm water controls, waste management, and material pollution controls. It is generally accepted that practices that perform well by themselves can be complemented by other practices to raise the collective level of erosion control effectiveness and sediment retention.

- This project would have at least one acre of Disturbed Soil Area (DSA) and is subject to the Construction General Permit. A Notification of Construction (NOC) would be submitted to the CVRWQCB Sacramento Office at least 30 days prior to construction.

- Standard Special Provision (SSP) 07-345 is a set of specifications used for projects that disturb more than one acre of soil. SSP 07-345 would be included in the construction specifications for this project and would clearly outline the contractor's responsibilities with respect to preparation and implementation of the SWPPP.

- In accordance with the MS4 NPDES general permit as directed by Caltrans SWMP and the Project Planning and Design Guide (PPDG) an evaluation of the project using the most recent approved evaluation guide is essential in determining if the incorporation of permanent storm water runoff treatment measures shall be considered for this project. This evaluation has been conducted through the completion of a SWDR.

- The project is proposing to widen the existing channel bottom of the South Fork Willow Slough to provide attenuation for peak discharges. This work may require the dewatering of this irrigation ditch. Irrigation water is a conditionally exempted discharge under the Caltrans permit and is not prohibited if identified as not being sources of pollutants to receiving waters or if appropriate control measures are developed and implemented under the SWMP to minimize the adverse impacts of such sources. The contractor would coordinate with the CVRWQCB through the Caltrans NPDES coordinator to ensure any dewatering performed during this proposed project conforms to these (NPDES permit) provisions.

- The proposed project would utilize and enhance existing natural biostrips and bioswales whenever possible. Biostrips would be incorporated into the roadway design throughout the project limits wherever gentle slopes allow. Bioswales would be incorporated into ditch design wherever the longitudinal slope, soil conditions, proper shape, and vegetation can be obtained.

Air Quality

- Caltrans Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C “Emission Reduction” and Section 14-9.03 “Dust Control”. Provision 14-9.02 “Air Pollution Control” requires the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.

Noise

- Noise levels would not exceed 86 dBA LMax at 50 feet from the job site activities from 9 p.m. to 6 a.m.

- Equipment would include an internal combustion engine with manufacturer-recommended muffler.

- An internal combustion engine would not be operated on the job site without the appropriate muffler.

Mitigation Measures

Visual/Aesthetics

- If Design Option “A” (part of location 1) is built, Caltrans would design and prepare a re-vegetation plan (RP) which would serve to minimize impacts. The plan would be jointly prepared by a landscape architect and biologist. The RP would include measures to replace existing native riparian vegetation that will be removed or indirectly affected by construction of the proposed project. The RP would include planting concepts, specifications, riparian restoration and wetland planting plans,

plant species, sizes and quantities. The Caltrans project biologist would take the lead on the RP with the help of the Caltrans Landscape Architecture staff to design a conceptual plan for the RP.

Natural Communities

- Mitigation to restore Valley oak riparian habitat would be performed as identified in the Lake and Streambed Alteration Agreement in coordination with the Department of Fish and Wildlife to compensate for the loss of Valley oak riparian habitat, regulated under sections 1600-1616 of the Fish and Game Code.

- Upon completion of project construction, the loss of 76 Valley oak trees at Taylor Creek would be mitigated on-site within Caltrans right-of-way. If planting cannot be accomplished on-site due to placement of Rock Slope Protection (RSP)/Armouring along banks in stream area, or if there is a general lack of suitable planting area then offsite mitigation options will be pursued to the start of construction.

- Disturbed areas would be re-contoured to the natural grade and re-vegetated with Valley oak seedlings and other native species appropriate for the site conditions.

Wetlands and Other Waters

- If necessary, mitigation for jurisdictional wetlands and other waters of the U.S. would be performed to achieve no net loss of the functions and values within the study area in accordance with the USACE Habitat Mitigation and Monitoring Proposal Guidelines (1991) and the Guidelines for Monitoring Riparian Mitigation (1994).

- The proposed project would permanently impact approximately 0.04 acre of potentially jurisdictional wetlands which would be mitigated on-site at a 1:1 ratio by creating wetlands as part of the pending consultation with USACE. The proposed project would also have indirect impacts to approximately 0.28 acre of potentially jurisdictional wetlands of the US, which would be mitigated on-site at a 1:1 ratio by restoring wetlands as part of the pending consultation with USACE.

- The proposed project would permanently impact approximately 0.98 acre of other waters of the U.S., and approximately 1.43 acres of waters of the State in Taylor Creek and a portion of South Fork Willow Slough, which would be mitigated on-site at a 1:1 ratio by creating vegetated buffers along the other impacted waterways in the study area. Temporary disturbance to 2.75 acres of jurisdictional other waters of the U.S. and waters of the State would also occur and those impacts would be mitigated on-site at a 1:1 ratio by restoring vegetated buffers along disturbed waterways.

Threatened and Endangered Species
Valley Elderberry Longhorn Beetle (Mitigation Measures)

- Caltrans would purchase credits sufficient to compensate for the planting of 250 elderberry shrubs, and an additional 290 associated native plantings from a USFWS approved conservation bank that services the proposed project area. Credits are purchased via VELB "units." Each unit translates to 10 credits, five for seedlings and five for associated species. Eighty units from a bank would compensate for 800 seedlings and associated species. See table below for mitigation ratios.

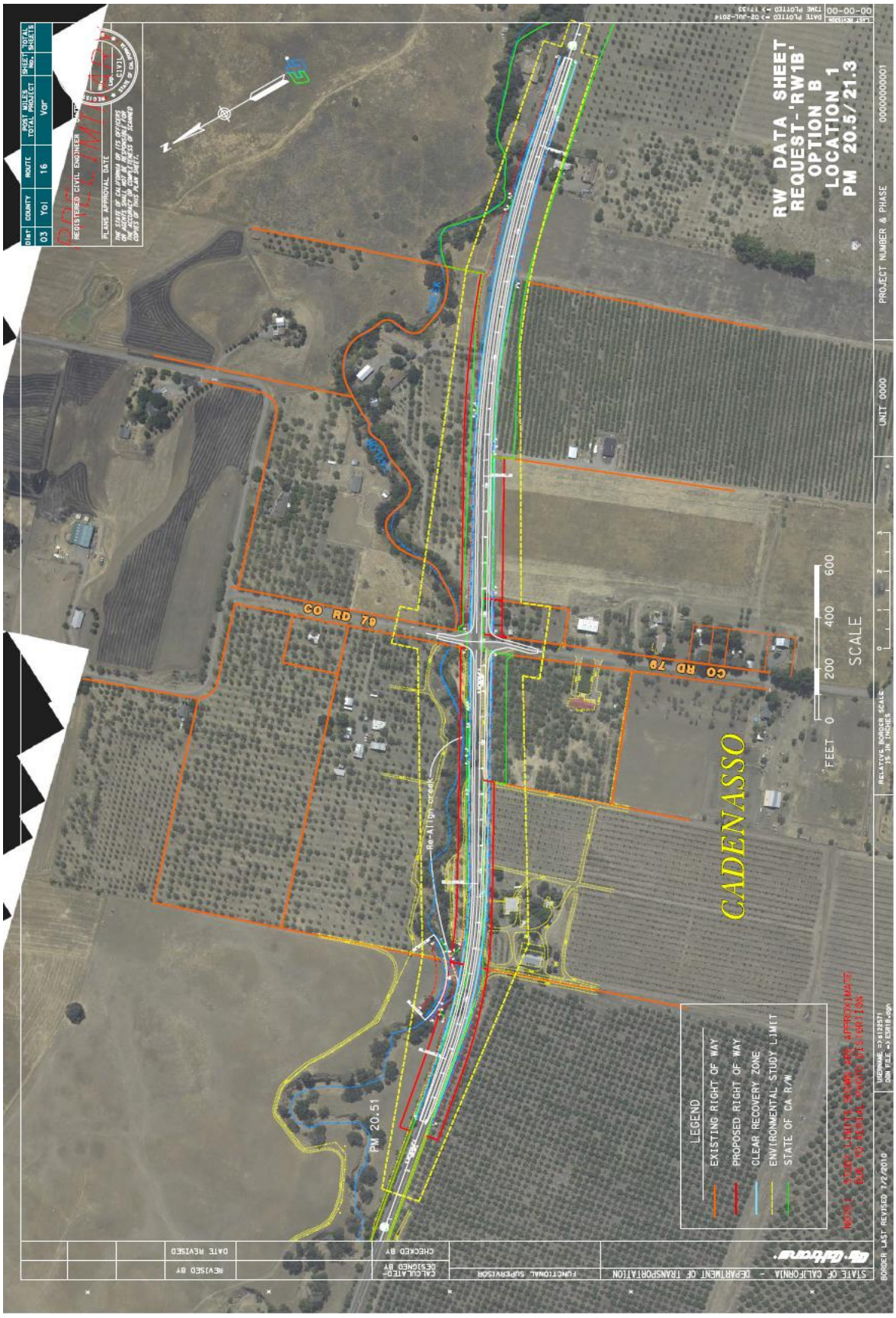
Compensatory Mitigation to Offset Project Impacts to Suitable VELB habitat

Location	Stem diameter	Number of Stems Impacted	Exit Holes Present on Shrub (Y/N)	Elderberry Seedling Ratio	Elderberry Seedling Plantings	Associated Native Plant Ratio	Associated Native Plantings
Non-Riparian	1"-3"	4	No	1:1	4	1:1	4
		0	Yes	2:1	0	2:1	0
	3"-5"	0	No	2:1	0	1:1	0
		0	Yes	4:1	0	2:1	0
	> 5"	0	No	3:1	0	1:1	0
		0	Yes	6:1	0	2:1	0
Riparian	1"-3"	39	No	2:1	78	1:1	78
		1	Yes	4:1	4	2:1	8
	3"-5"	20	No	3:1	60	1:1	60
		2	Yes	6:1	12	2:1	24
	> 5"	15	No	4:1	68	1:1	68
		3	Yes	8:1	24	2:1	48
Total Elderberry and Associated Plant Species Plantings Needed toward Conservation of the VELB					**250**		**290**

Giant Garter Snake (Mitigation Measures)

- Caltrans would restore all 0.61 acre of GGS habitat through the on site relocation, slope improvement and revegetation of South Fork Willow Slough and irrigation ditch. In addition, a one-year monitoring report showing pre- and post-project area photos will be submitted to USFWS and/or CDFW one year from the restoration implementation. The restoration and monitoring would follow USFWS Guidelines. If the restoration is unsuccessful, as determined by USFWS, consultation would be reinitiated and would include the appropriate actions necessary to fulfill the success criteria for restoration of temporary disturbance.

Appendix E. Environmental Study Limit Mapping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CO RD 79
CADENASSO
Re-Align-creek
PM 20.51
SCALE
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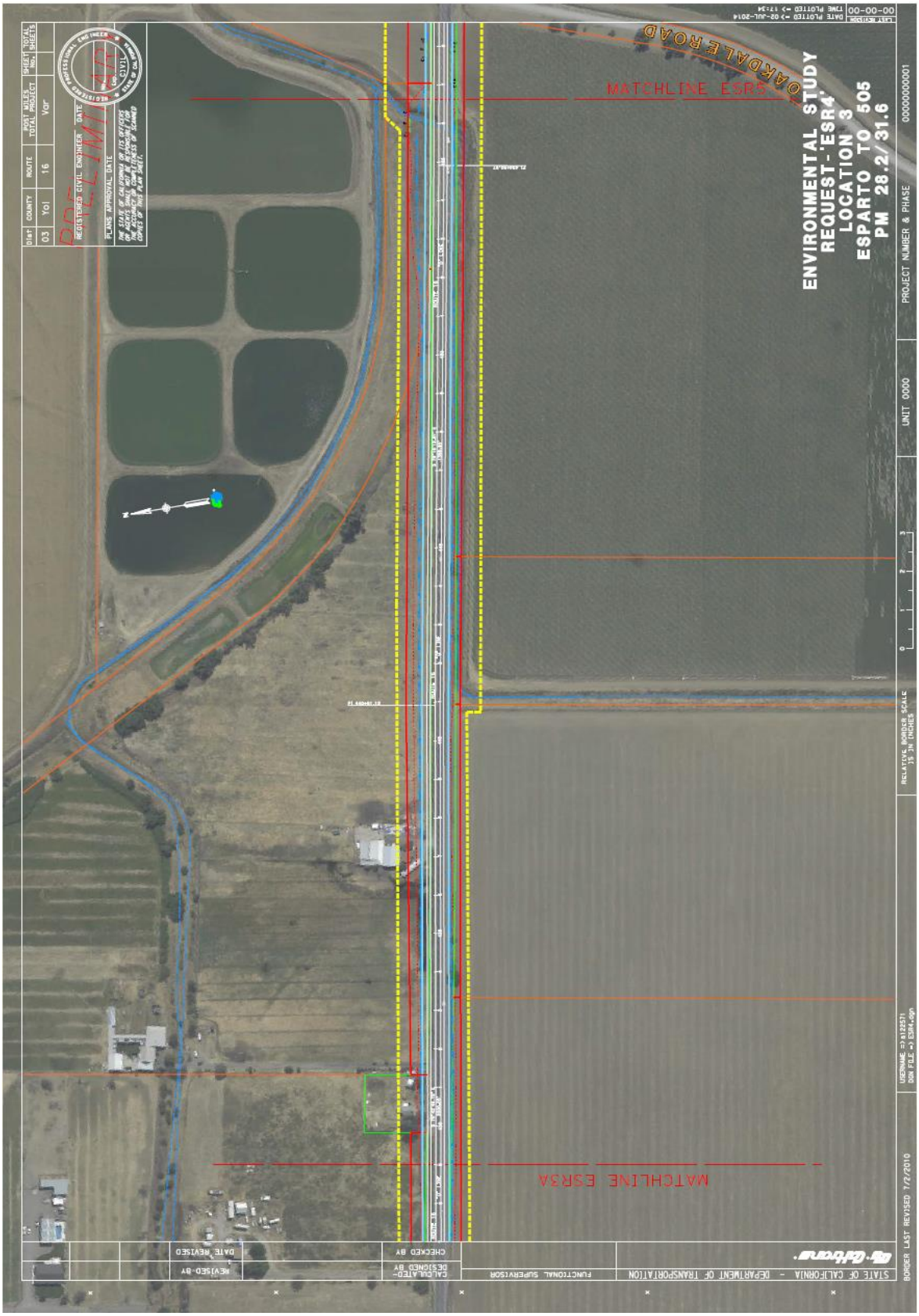
LEGEND
EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY
CLEAR RECOVERY ZONE
ENVIRONMENTAL STUDY LIMIT
STATE OF CA R/W
PRELIMINARY
REGISTERED CIVIL ENGINEER
PLANS APPROVAL DATE
Dist
03
COUNTY
Yol
ROUTE
16
Var
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
DATE REVISED
REVISED BY
BORDER LAST REVISED 7/2/2010
PROJECT NUMBER & PHASE
UNIT 0000


ENVIRONMENTAL STUDY
REQUEST-'ESR2'
LOCATION 2
PM 23.2/ 23.5
CO RD 82B
LEGEND
EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY
CLEAR RECOVERY ZONE
ENVIRONMENTAL STUDY LIMIT
STATE OF CA R/W
SCALE
FEET 0 100 200 300
NOTE: STUDY LIMITS SHOWN ARE APPROXIMATE
DUE TO AERIAL PHOTO DISTORTION
PROJECT NUMBER & PHASE
UNIT 0000
DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED


ENVIRONMENTAL STUDY REQUEST-'ESR3A'
LOCATION 3
ESPARTO TO 505
PM 28.2/ 31.6
MATCHLINE ESR4
ESPARTO
Co Rd No 86-A
Exist 20' EASEMENT
YOLO AVE
Co Rd No 21-A
LEGEND
EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY
CLEAR RECOVERY ZONE
ENVIRONMENTAL STUDY LIMIT
STATE OF CA R/W
NOTE: STUDY LIMITS SHOWN ARE APPROXIMATE DUE TO AERIAL PHOTO DISTORTION
PRELIMINARY
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION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LOCATION 3
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PM 28.2/31.6
MATCHLINE ESR5
MATCHLINE ESR3A
OAKDALE ROAD
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
PROJECT NUMBER & PHASE
UNIT 0000
RELATIVE BORDER SCALE IS IN INCHES
BORDER LAST REVISED 7/2/2010


MATCHLINE ESR6
ENVIRONMENTAL STUDY
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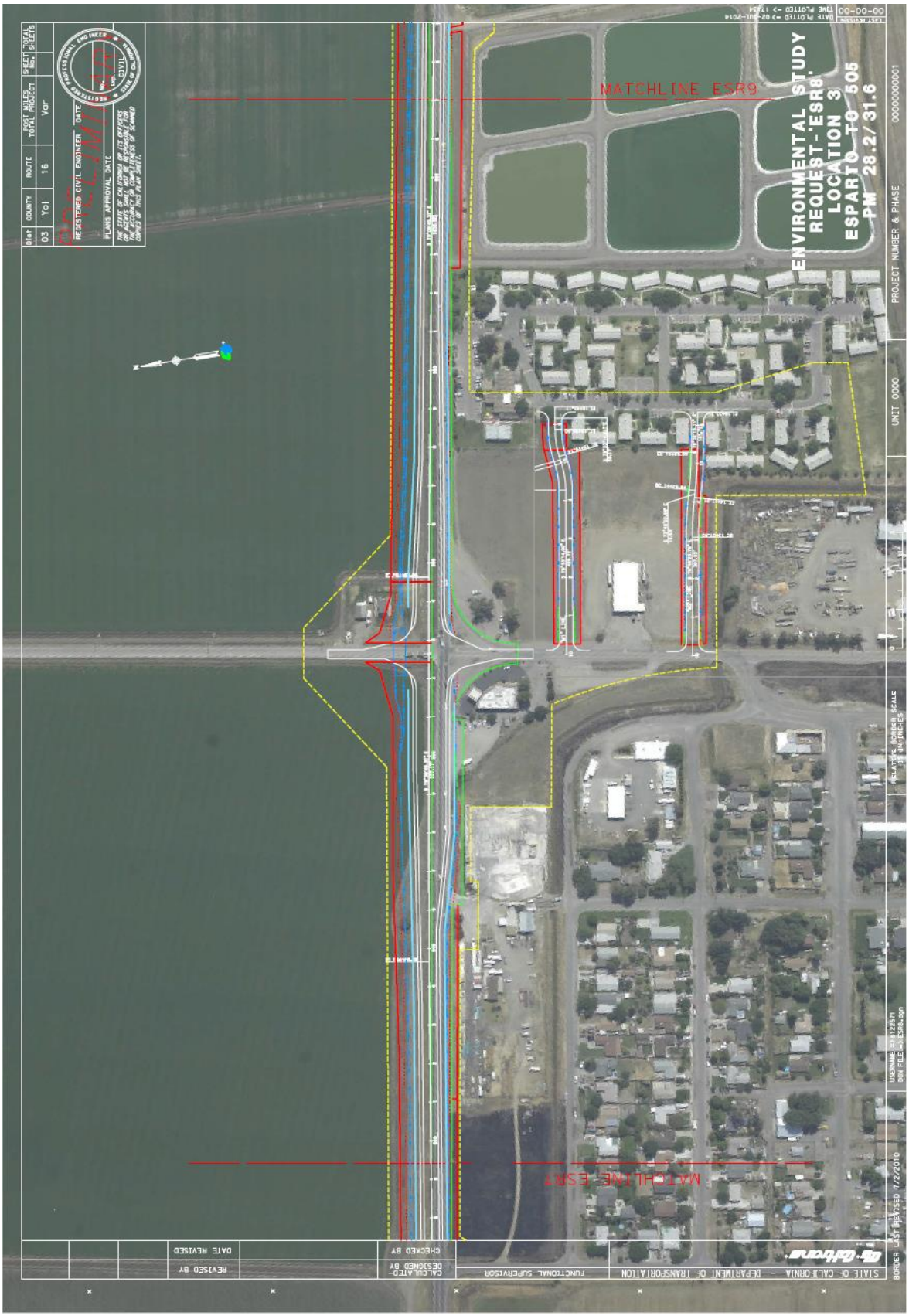
LOCATION 3
ESPARTO TO 505
PM 28.2/31.6
MATCHLINE ESR4
OAKDALE ROAD
WILLOW SLOUGH


MATCHLINE ESR7
ENVIRONMENTAL STUDY
REQUEST-'ESR6'
LOCATION 3
ESPARTO TO 505
PM 28.2/31.6
CO RD 88
MATCHLINE ESR5
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR
REVISED BY
DATE REVISED
CHECKED BY
PROJECT NUMBER & PHASE
UNIT 0000
BORDER LAST REVISED 7/2/2010


ENVIRONMENTAL STUDY
REQUEST-'ESR7'
LOCATION 3
ESPARTO TO 505
PM 28.2/31.6
MATCHLINE ESR8
MATCHLINE ESR6
REGIN TWO WAY
LEFT-TURN LANE (TWLTL)
REGISTERED CIVIL ENGINEER
PLANS APPROVAL DATE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
BORDER LAST REVISED 7/2/2010
RELATIVE BORDER SCALE
UNIT 0000
PROJECT NUMBER & PHASE


MATCHLINE ESR9
ENVIRONMENTAL STUDY
REQUEST-ESR8
LOCATION 3
ESPARTO TO 505
PM 28.2/31.6
MATCHLINE ESR7
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION


ENVIRONMENTAL STUDY
REQUEST-'ESR9'
LOCATION 3
ESPARTO TO 505
PM 28.2/31.6
South Fork Willow Slough
Bridge No. 22-0028
WILLOW
SLOUGH
MATCHLINE ESR8
PRELIMINARY

Appendix F. Department of Conservation Notification of Farmland Take Letter

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMOND G. BROWN JR., Governor

DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL SERVICES BRANCH M1
DISTRICT 3, 705 B Street
MARYSVILLE, CA 95901
PHONE (530) 741-4276
FAX (530) 741-4457
TTY 711

Flex your power!
Be energy efficient!

June 5, 2014

California Department of Conservation
801 K Street
Sacramento, CA 95814-3528

YOL-16 PM 20.5/31.6
EA 03-0C4700
EFIS 03-0000-0015
YOL-16 Safety Improvement Project

Dear Sir or Madam,

In accordance with Government Code Section 51291(b), this letter is to serve as notification of a take and easement of farmland, including some Williamson Act contracted land, for a proposed highway safety improvement project in Yolo County. The project proposes to the safety at three separate locations along YOL-16 (PM 20.5/21.3, PM 23.2/23.5 and at PM 28.2/31.6) in Yolo County. The locations are as follows (limits are approximate). The scope of work would include:

Location 1 - County Road (Co Rd) 79, from 0.35 miles west of Co Rd 79 to 0.40 miles east of Co Rd 79, postmiles (PM) 20.5/21.3 (0.8 miles)

- Adding a left turn pocket for County Road 79
- Straightening 2 horizontal curves (increasing the curve radius)
- Widening and paving shoulders to 8 ft.
- Installing rumble strips in the shoulder
- Providing a 20 ft. Clear Recovery Zone (CRZ)*
- Additional work described in Option A or Option B
- Drainage work as needed

Option A work

- Shifting the alignment north to avoid a house

Option B work

- Shifting the alignment south to reduce impacts to Taylor Creek

Location 2 – West of Co Rd 82B, from 0.34 miles west of Co Rd 82B to 200 ft. west of Co Rd 82B, PM 23.2/23.5 (0.3 miles)

- Straightening the horizontal curve (increasing the curve radius)
- Widening and paving shoulders to 8 ft.
- Installing rumble strips in the shoulder
- Providing a 20 ft. CRZ
- Drainage work as needed

Location 3 – Esparto to Interstate (I)-505, from 350 ft. west of Co Rd 21A to South Fork Willow Slough, PM 28.2/31.6 (3.4 miles)

Esparto to Madison

- Roundabout at Co Rd 21A (Optional)

"Caltrans improves mobility across California"

- Shifting the alignment to the north (the roadway profile will not be raised)
- Widening and paving shoulders to 8 ft.
- Installing rumble strips in the shoulder
- Providing a 20 ft. CRZ
- Drainage work as needed

Madison to I-505

- Shifting the alignment to the north (the roadway profile will not be raised)
- Widening and paving shoulders to 8 ft.
- Installing rumble strips in the shoulder
- Providing a 20 ft. CRZ
- Adding a roundabout at Co Rd 89 or widening and adding a traffic signal
- Adding a two way left turn lane (TWLTL) from I-505 through to Tutt St.
- Relocating the Madison Migrant Center driveway to Co. Rd 89 (Optional)
- Drainage work as needed

The location of this project was not based on consideration of the lower cost of acquiring land in an agricultural preserve (§51292(a)). There is no other land within or outside the preserve on which it is reasonably feasible to locate this project (§51292(a)(b)). The location was chosen because of a high number of collisions in the project area. In recent years the traffic volumes on SR 16 have increased within the project limits, along with an increase in collisions that are above the statewide average for a similar facility. Farmland, including some Williamson contracted land, was identified for the take of this section of SR 16 due to the fact that these are the locations where the collisions are occurring and these parcels are the only parcels on which construction can occur. The location of this project was not based on consideration of the lower cost of acquiring land in an agricultural preserve (§51292(a)). There is no other land within or outside the preserve on which it is reasonably feasible to locate this project (§51292(a)(b)).

Several maps are included in this packet. Map 1 is the general project location map. Location maps 1-3 are the project layout maps that shows the highlighted Williamson contracted Agricultural Land Parcels that will be impacted by the proposed project. In addition to the maps I have included a Farmland APN Table which lists the APN's, farmland, including Williamson acreage and the amount of acreage that is proposed for take. The total amount of farmland, including Williamson, that will be impacted is 30.24 acres. Please note that there are various parcels which will be used for drainage easements only and will require no take. Those parcels are not highlighted on the maps.

We are requesting your response to Parts II, IV, and V of the enclosed "Farmland Conversion Impact Rating" Form AD-1006.

If you have any questions, please contact Chris Carroll of my staff at (530) 741-4276 (e-mail: Chris_Carroll@dot.ca.gov)

Sincerely,

Chris Carroll, Associate Environmental Coordinator
North Region Office of Environmental Management, Branch M1

Attachments

NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEB SITE conservation.ca.gov

July 8, 2014

VIA EMAIL: Chris_Carroll@dot.ca.gov
Mr. Chris Carroll, Associate Environmental Coordinator
Department of Transportation (Caltrans)
North Region Office of Environmental Management, Branch M1, District 3
703 B Street
Marysville, CA 95901

NOTICE OF THE INTENTION TO ACQUIRE 30.24± ACRES FOR THE YOLO STATE ROUTE (SR) 16 SAFETY IMPROVEMENT PROJECT, YOLO COUNTY

Dear Mr. Carroll:

Thank you for your June 5, 2014 email advising the Department of Conservation (Department) Division of Land Resource Protection (Division) that Caltrans proposes to acquire portions of 27 parcels located in the project vicinity totaling 30.24± acres. Eleven parcels are indicated as land located within an agricultural preserve (see table below). The project proposes to construct safety improvements at three locations along YOL-16 (PM 20.5/21.3, PM 23.2/23.5 and 28.2/31.6), in Yolo County. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation Act and other agricultural land conservation programs. The Department offers the following comments with respect to the public acquisition procedures stated in Government Code (GC) §§51290-51295.

Project Description

The project as proposed is for the acquisition of 27 parcels for a highway safety improvement project in Yolo County along SR 16. Eleven parcels, highlighted in yellow are restricted by LCA contracts.

APNs of Properties Restricted by LCA Contracts in the Project Area Intended for Acquisition				
Parcel Number	Current Size (Acres)	Amount Required (Acres)	Remainder Acres)	Owners
48-030-03	316.12	.62	315.50	Gordon, Charles & Mary
48-060-01	15.89	1.62/0.91	14.27	Guildera, Leslie
48-060-14	8.15	0.99/0.47	7.16	Lee Living Trust
48-070-16	21.99	0.37/0.72	21.27	Borg, Harry G. & Rosanna E.
48-080-01	36.65	0.62/0.88	35.77	Hy, Mowe K &Ky V
48-080-08	22.59	0	22.59	Morris, Robert M. and Judith L.
48-120-10	309.75	2.49	307.26	Triple Creek Farm LLC
49-060-11	326.33	3.59	322.74	Penrose, RE & JL Family Trust
49-090-11	190.83	0.18	190.65	Kathyanna Ranch LCC
49-110-005	13.13	0.10	13.03	Driver Remainder Trust & Stephens, John & Meredith
49-110-009	104.1	0.58	103.52	Driver Remainder Trust & Stephens, John & Meredith

APNs of Properties located in the Project Area Intended for Acquisition Not Restricted by LCA Contracts				
Parcel Number	Current Size (Acres)	Amount Required (Acres)	Remainder Acres)	Owners
48-080-02	6.04	0	6.04	Wright Living Trust
48-040-08	280.46	0.80	279.66	Pelayo Fernando et al.
49-120-13	103.4	2.41	100.99	Chicohominy Lands Inc.
49-120-012	64.45	2.45	62.00	Madison 155 Ranch LLC
49-060-15	376.02	5.53	370.49	Vann Brother
49-060-07	142.76	0.47	142.29	Solano Concrete Co. Inc.
49-060-09	8.51	0.32	8.19	Giumarra, Sal and Al Farms
49-130-008	19.43	2.38	17.05	Salvador, Conrad and Mary
49-160-05	6.85	0.31	6.54	De La Fuente, Carlos
49-110-18	70.43	0.91	69.52	Bellvue North 250 LLC
49-100-003	214	1.14	212.86	Bellvue North 250 LLC
49-110-021	108.62	0.52	108.10	Doris Driver Remainder Trust
49-100-001	148.94	0.65	148.29	Nishi Farms Inc.
49-100-02	148.94	0.74	148.20	Grube, Ann E.
49-160-15	16.88	0.87	16.01	Emerald Homes Lt. LLC
49-160-14	6.80	0.33	6.47	Esparto Unified School District
	Totals	**30.24**		

Caltrans intends to acquire portions of the 27 parcels because the design standards require shoulder-widening on the length of the project at three locations. The locations and scope of the work are as follows:

Location 1 – County Road (Co Rd) 79, from 0.35 miles west of Co Rd 79 to 0.40 miles east of Co Rd 79, postmiles (PM) 20.5/21.3 (0.8 miles)

- Adding a left turn pocket for County Road 79
- Straightening 2 horizontal curves (increasing the curve radius)
- Widening and paving shoulders to 8 ft.
- Installing rumble strips on the shoulder
- Providing a 20 ft. Clear Recovery Zone (CRZ)*
- Drainage work as needed

Option A work

- Shifting the alignment north to avoid a house

Option B work

- Shifting the alignment south to reduce impacts to Taylor Creek

Location 2 – West of Co Road 82B, from 0.34 miles west of Co Rd 82B to 200 ft. west of Co Rd 82B, PM 23.2/23.5 (0.3 miles)

- Straightening the horizontal curve (increasing the curve radius)
- Widening and paving shoulders to 8 ft.
- Installing rumble strips in the shoulder
- Providing a 20 ft. CRZ
- Drainage work as needed

Location 3 – Esparto to Interstate (I)-505, from 350 ft. west of Co Rd 21A to South Fork Willow Slough PM 28.2/31.6 (3.4 miles)

Location 3 – Esparto to Interstate (I)-505, from 350 ft. west of Co Rd 21A to South Fork Willow Slough PM 28.2/31.6 (3.4 miles)

Esparto to Madison

- Roundabout at Co. Rd 21A (Optional)
- Shifting the alignment to the north (the roadway profile will not be raised)
- Widening and paving shoulders to 8 ft.
- Installing rumble strips in the shoulder
- Providing a 20 ft. CRZ
- Drainage work as needed

Madison to I-505

- Shifting the alignment to the north (the roadway profile will not be raised)
- Widening and paving shoulders to 8 ft.
- Installing rumble strips in the shoulder
- Providing a 20 ft. CRZ
- Adding a roundabout at Co Rd 89 or widening and adding a traffic signal
- Adding a two way left turn lane (TWLTL) from I-505 through Tutt St.
- Relocating the Madison Migrant Center driveway to Co. Rd 89 (Optional)
- Drainage work as needed.

Required Findings

With some limited exceptions, the Land Conservation Act prohibits public agencies from locating public improvements in agricultural preserves, unless the following specific findings are made by the public agency (Government Code §51292.):

(a) The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve.
(b) If the land is agricultural land covered under a contract pursuant to this chapter for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement.

Your letter states that the locations for the safety improvements were chosen because of a high number of collisions in the project area. In recent years the traffic volumes on SR 16 have increased within the project limits, along with an increase in collisions that are above the statewide average for a similar facility. Farmland, including some properties restricted by Land Conservation Act contracts, was identified for acquisition along this section of SR 16 because these are the locations where the collisions are occurring and the subject parcels are the only parcels on which construction can occur consistent with the design specifications of the project. The location of this project does not appear to be based on consideration of the lower cost of acquiring land in an agricultural preserve (GC §51292(a)). There is no other land within or outside of the preserve on which it is reasonably feasible to locate this project (GC §51292(b)).

Since the project involves roadway improvements and requires the acquisitions to consist of the properties located along the proposed route as specified in the project's design standards, it appears that the findings of Government Code §51292 can be made.

Eminent Domain

A Land Conservation Act contract is an enforceable restriction pursuant to Article XIII, §8 of the California Constitution and Government Code §51252. Pursuant to §51295, a Land Conservation Act contract may be voided through acquisition by eminent domain or in lieu of eminent domain (Code of Civil Procedure §1230.010 et seq. and Government Code §7260 et seq.). If the proposed acquisitions occur in a manner that does not void the contracts, the uses of the contracted properties will continue to be restricted by the terms of the contracts and the provisions of the Act. The Department does not provide counsel regarding eminent domain law, but encourages Caltrans to obtain legal counsel for this purpose. When the properties have been acquired by, or in lieu of eminent domain, Caltrans is requested to provide copies of the condemnation orders or the offers made to the landowners to purchase the land in lieu of eminent domain to the Department of Conservation to complete the administrative record.

Future Notifications

Please be advised that, pursuant to Government Code §51291(d), the Department and Yolo County must be notified of any proposed, significant changes to the project. If Caltrans determines not to locate the proposed public improvements on the subject properties, before returning the lands to private ownership, it must notify the Department and Yolo County, and the lands must be reenrolled in new contracts or encumbered by enforceable restrictions at least as restrictive as that provided in the Land Conservation Act (Government Code §51295). The Department and Yolo County must also be notified within 10 days when the properties are actually acquired (Government Code §51291(c)).

If you have any questions regarding these comments, please feel free to contact Jacquelyn Ramsey, Associate Environmental Planner at (916) 323-2379; email: Jacquelyn.Ramsey@conservation.ca.gov.

Sincerely,

Molly A. Penberth, Manager
Conservation Support Unit
Department of Conservation
Division of Land Resource Protection

cc: Yolo County Board of Supervisors
Yolo County Farm Bureau

Appendix G. AD-1006 Farmland Conversion Form

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request April 18, 2014		
Name of Project YOL-16 Safety Improvement Project	Federal Agency Involved FHWA		
Proposed Land Use Transportation	County and State Yolo County, CA		
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 4/21/14	Person Completing Form: Phil Hogan	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)* YES ☑ NO ☐	Acres Irrigated 246,341	Average Farm Size 488	
Major Crop(s) Processing tomatoes; wine grapes	Farmable Land In Govt. Jurisdiction Acres: 311,307 % 48%	Amount of Farmland As Defined in FPPA Acres: % 390252 ac 60.2%	
Name of Land Evaluation System Used Revised Storie Index	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS 6/4/2014	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	30.24			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	3088.06			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	28.0			
B. Total Acres Statewide Important or Local Important Farmland	2.2			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	.008			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	36%			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	65			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	14			
2. Perimeter In Non-urban Use	(10)	9			
3. Percent Of Site Being Farmed	(20)	20			
4. Protection Provided By State and Local Government	(20)	20			
5. Distance From Urban Built-up Area	(15)	0			
6. Distance To Urban Support Services	(15)	0			
7. Size Of Present Farm Unit Compared To Average	(10)	0			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	4			
10. On-Farm Investments	(20)	10			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	1			
TOTAL SITE ASSESSMENT POINTS	160	78	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	65	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	78	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	143	0	0	0

Site Selected: Site A	Date Of Selection 6/4/14	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

There is no other land within or outside the preserve on which it is reasonably feasible to locate this project (§51292(a)(b)).

Name of Federal agency representative completing this form: Chris Carroll - Caltrans District 3	Date: 4/18/14

(See Instructions on reverse side) **Form AD-1006 (03-02)**

List of Technical Studies

Initial Site Assessment (Hazardous Waste, Caltrans 2014)

Natural Environmental Study (Biology, Caltrans 2014)

Historic Property Survey Report (Archaeology, Caltrans 2014)

Water Quality Assessment Exemption (NPDES, Caltrans 2013)

Noise Assessment (Noise Report, Caltrans 2013)

Air Quality Assessment (Air Quality Report, Caltrans 2013)

Visual Impact Assessment (VIA, Caltrans 2014)

Traffic Operational Analysis Report (Traffic Operations, Caltrans 2014)

Community Impact Assessment (CIA, Caltrans 2014)

Relocation Impact Memorandum (Caltrans 2014)

Road Safety Assessment (Kimley-Horn and Associates for Caltrans, 2006)